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THE COPPER AGE SETTLEMENT FROM TÂRGU MUREŞ–SHOPPING CITY

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During the construction of the Shopping City Mall in Târgu Mureş in 2018, traces of a prehistoric settlement were found. The Mureş County Museum carried out a rescue excavation in the area. Based on the observations made during the research and the material collected, the settlement can be attributed to the Ariuşd cultural group of the Early Copper Age. In the excavated area, traces of at least four surface dwellings and several pits belonging to the settlement were discovered. The vast majority of the collected material is made up of ceramics, wattle and daub fragments of houses, a few burnt clay and stone objects, and a relatively small amount of animal bones. Based on the characteristics of the archaeological material and the radiocarbon data, the settlement can be attributed to the early phase of the Ariuşd group, roughly in the second third of the 5th millennium BC. In addition to the Copper Age material, some fragments of vessels attributed to the Middle Bronze Age Wietenberg culture were also discovered.

Keywords: Copper Age, Ariuşd group, settlement, pottery, radiocarbon dating

Cuvinte-cheie: Eneolitic, grupul Ariuşd, aşezare, ceramică, datare cu radiocarbon

THE SITE AND THE EXCAVATIONS

The site is located on the south-eastern edge of Târgu Mureş municipality, in the direction of Corunca village, on the second high terrace south of the meadow where the confluence of Corunca Stream (Vaţman Stream) and Sásvári Stream forms the Pocloş Stream, northeast of the Csere-erdő forest, south of the E60 European road, about 350 m south of the roundabout situated at the intersection of Sighişoarei Road and 1 Decembrie 1918 Road, on the former orchard's lot and current location of the Shopping City Târgu Mureş shopping centre. The 2018 development works, undertaken on the terrace where the shopping centre was built, critically affected the plateau on which the prehistoric settlement had stood (Pl. I). Its

identification occurred with the removal of the vegetal layer, in the bank created by the levelling works, after a large part of the territory had been excavated to depths sometimes exceeding 15 m. Archaeological investigations could only be carried out in the protection area of the two gas pipelines, but the delay in their removal and decommissioning held up the excavation of the entire hill (Pl. II).¹

The area where archaeological investigations were possible to undertake concealed the eastern edge of a Copper Age settlement on a high terrace (Fig. 1). The area which shows traces of dense population is bordered by a steep slope to the east and a gentle slope to the south. While the north-eastern and eastern area towards

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the steep slope completely lacks archaeological finds, a group of small holes towards the south-east, at some distance from the archaeological contexts on the upper plateau, attest the existence of an inhabited area also in this part of the gentle slope. Following the mechanical excavation, it was possible to ascertain the south-eastern and north-western limits of this distinct sector, thanks to the layout of the deepened features observed at the level of the sterile clay. Both the excavated earth and the profiles resulting from the mechanical excavation indicated the continuation of the Copper Age settlement, however, its extension to the east and west was impossible to identify, since these areas had been affected before the start of the archaeological research. In this part of the hill, occasional ceramic fragments from the Middle Bronze Age Wietenberg culture showed up in the plough layer and on the surface, with no identified archaeological features from this period. The amount of archaeological material related to the Copper Age settlement level indicates that the settlement in this sector was less intensely inhabited than that on the upper plateau.

From a stratigraphic viewpoint, the entire terrace's 0.30–0.50 m thick ploughed and levelled upper layer was followed by a dark brown layer of culture about 0.20 m thick, with archaeological material (ceramic and wattle and daub fragments), burnt clay pigments, animal bones and gravel. Below it, at a depth of 0.50/0.70 m to 1.20/1.50 m, there was a yellowish-brown compact layer with a few burnt clay patches, under which the sterile stratum was situated, consisting of a yellow clay, typical of the main and secondary valleys of the Mureş River in this sector.

The 13 pits researched in the south-eastern sector were somewhat clustered. They were round or oval in shape, their maximum diameter ranging from 0.36 to 1.10 m, most of them measuring between 0.60 and 0.80 m. Some were only slightly dug into the clay (0.12–0.25 m), others were of medium depth (0.30–0.70 m). The fill of these holes is compact and consists of yellowish-brown or blackish-brown earth, sometimes including clay lentils, mixed with small-sized daub and ceramic fragments (Pl. III).

Discovered somewhat isolated, between the south-eastern sector and the upper plateau, Cx.14–16 are pits similar to those described above, 0.22–0.68 m deep, measuring 0.44–1.00 × 0.32–0.84 m. Their fill consists of brownish-black clay, compact, pigmented soil and smaller or larger fragments of daub (Pl. III).

The upper plateau of the hill seems to have been the most intensely inhabited. Previous levelling and landscaping works have considerably disturbed the layer related to the Copper Age habitation, and a large amount of ceramic material was recovered from the surface. The remaining layer's consecutive stripping down to the clay level revealed several archaeological features, most of them deepened in the ground (Fig. 1). In terms of their diameter at clay level, the pits on the upper plateau are of two types: small and aligned, forming certain contexts with superstructures elevated on supporting posts, and large pits, arranged among and near the constructions on post.

The post holes are similar both in shape and filling to those in the south-eastern part of the plateau: their diameter at the level of outlining (of the sterile clay) varies between 0.35 and 1 m, and their depth between 0.11 and 1.10 m. They deepen with more or less articulately oblique walls, some having the shape of a funnel with a wide upper level opening either on both sides or only on one (Pl. III). The fill of the holes consisted of compact brownish-black earth containing fragments or daub pigments and, less frequently, pottery or river stones.

By their arrangement in two parallel rows and sometimes a further post hole on a third side arranged towards the inside of the area delimited by the other posts, enclosing a roughly rectangular area, one can assume that Cx.20–26, 34–37 with 40–41, as well as Cx.47–54, and most probably also Cx.27–31 served as post holes of constructions (Fig. 2; Pl. II).

The holes of Cx.20–26 are simple, with slightly oblique walls. They are shallowly deepened (0.11–0.20 m), measure between 0.38 and 0.64 m in diameter, their fill consisting of black-brown, loamy, compact soil, without archaeological material. Their size makes them the site's smallest constructions of this type.



Fig. 1. Târgu Mureș–*Shopping City*. Aerial view of the archaeological site from the north-west (upper picture) and from the south-west (lower picture).

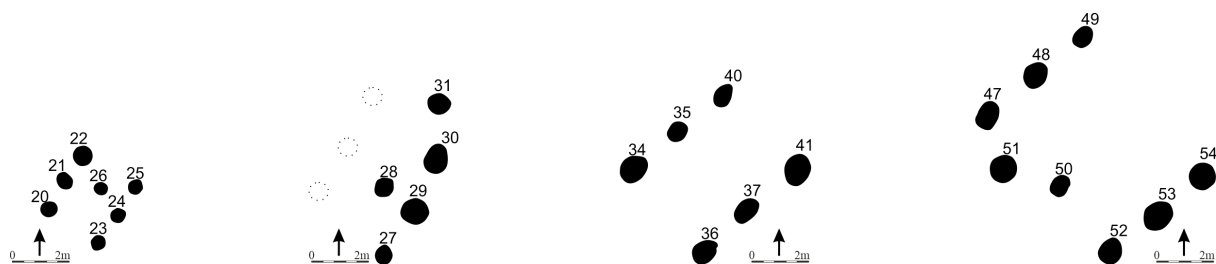


Fig. 2. Buildings presumed based on the location of post holes.

Cx.27–31 seem to have formed another structure. Cx.29–31 are aligned on a north–south axis, Cx.28 being the hole within, while Cx.31 is outside the perimeter enclosed by the six posts, of which the row of three western post holes could not be identified as they were outside the area that was safe to investigate archaeologically. The diameter of the holes ranged between 0.50 and 1.04 m, they sank 0.30–0.80 m deep into the sterile clay. The fill of the holes consists of brownish-black, loamy, compact earth, pigmented with fragments of burnt wattle and daub, charcoal and ceramic.

Cx.32–33 (Pl. III/32; IV/33) were located at approximately equal distance from the construction circumscribed by Cx.27–31, Cx.34–37 and Cx.40–41, probably being the annex of one of these, or, if the constructions were contemporary, even of both large structures. Both pits were oval in shape, Cx.32 was 0.56×0.89 m in diameter and 0.73 m deep. Pit Cx.33 was 1.06×2.05 m, with vertical walls and unevenly deepened bottom, ranging from 0.40 to 0.89 m. On the western side, a posthole with a diameter of 0.40 m and oblique walls deepening to 1.40 m was discovered. The fill of both holes consisted of black-brownish earth, pigmented with shredded daub and charcoal that hid animal bones, ceramic fragments and wattle and daub. The presence of animal remains in these archaeological features and their absence from the fill of the post holes of the other structures indicate a possible use of the construction for domestic food-related occupations.

The two rows of three holes each in Cx.34–35 and Cx.40–41 indicate another construction on a post structure (Fig. 2; Pl. II). This construction was missing the post hole on the third side. The holes on the north-western side are all deeper

(0.72–0.97 m), with funnel-shaped or stepped openings. On the south-eastern side the holes are 0.50, 0.60 and 0.98 m deep. Their diameter was between 0.55 and 1.05 m. The fill of the post holes consisted of black-brown, loamy, compact earth pigmented with fragments of potshards, wattle, daub and charcoal.

Another construction, the largest of those built on a two-rowed post structure, is indicated by holes 47–54 (Fig. 2; Pl. II). Their diameter was between 0.65 and 0.96 m, their depth between 0.50 and 1.12 m. The fill of the holes consists of brownish-black, loamy, compact, pigmented earth with ceramic fragments and wattle and daub.

In the case of these types of constructions, the presence of pigments and daub fragments in the fill of the holes suggests that their elevation was made of clay. One can notice that all four roughly quadrangular structures are aligned on a north-east–south-west axis, two of them with a slight deviation to north/north-east-south/south-west.

Other pits, different both in shape and in the type of sample found in their fill, were observed around these constructions. Near the construction marked by holes 20–26, in Cx.17, which was 1.70 m in diameter and 0.22 m deep (Pl. III/17), daub and ceramic fragments, animal bones and lithic material were found.

Cx.44 was located to the SW of the same construction. The pit was 2.65×2.30 m in diameter, sunk with vertical walls and irregular edges. The centre of the pit was about 0.30 m deeper than the level of the large pit. In the fill of the context, especially from the southern side, fragments of several vessels, small traces of charcoal and animal bones were found (Pl. IV/44).

Cx.39 was located north-west of the

construction marked by Cx.34–37, Cx.40–41, and due to disturbance caused by construction works, it was only partially excavated (3.00×1.70 m), with the north-eastern part of the pit being uncovered. Its walls were oblique, the uneven bottom was between 0.36 and 0.68 m deep, deepening towards the edges (Pl. IV/39; V/2). From the fill of the pit, especially from the bottom, came ceramic fragments and a whole vessel, stones, animal bones, daub and charcoal. On the south-western side, a hole with a diameter of 0.60 m was dug 0.20 m below the level of the context's bottom.

To the north-east of the same building were two large pits. Cx.42 was oval in shape with dimensions of 1.90×2.50 m, with the long axis oriented north–south. The walls were slightly oblique with irregular edges. The bottom had an oval cavity in the middle, which was 0.41 m deeper than the level of the pit's bottom (Pl. IV/42; V/3). The fill of the pit consisted of

brownish-black, loamy, compact earth containing ceramic fragments and charcoal. Cx.43 lies to the south-east of Cx.42. The oval pit was 2.85×3.30 m in diameter, with the long axis also oriented north–south. The walls were slightly oblique with irregular edges and a straight bottom (Pl. IV/43; V/4). The fill of the pit was similar to the neighbouring one.

In addition to the above-mentioned constructions and their annexes, somewhat peripheral to them, an elongated oval-shaped platform measuring 9×2.5 m (Cx.55) was also identified, consisting of earthen floor, bordered by numerous ceramic fragments, daubs and animal bones (Pl. V/1). The presence of the daub fragments indicates clay superstructures, but considering the lack of post holes and the extension of the platform, this construction seems to have had lighter structural elements, or may even have been a simple wattle-and-daub enclosure, without a roof.

GENERAL FEATURES OF THE COPPER AGE SETTLEMENT

On the basis of the archaeological features discovered, as well as the relative and absolute chronological data, the settlement discovered at Târgu Mureş–*Shopping City* can be attributed to the Ariuşd group of the Copper Age. This cultural group, part of the great Eastern European Ariuşd–Cucuteni–Trypillia cultural context, spread during the 5th–4th millennia in the eastern and south-eastern parts of Transylvania.² The distribution area of the group generally included the territory of the intra-montane depressions of the Eastern Carpathians.³ In this way the upper course of the Mureş on the Transylvanian Plateau represented a somewhat peripheral area of this group. Despite this fact, several settlements have been discovered in this area in recent decades. From the wider area of the city of Târgu Mureş we can thus mention

the resorts of Târgu Mureş–*Tornakert*,⁴ located on the lower terraces of the Mureş River, in the centre of the current city, Sângeorgiu de Mureş–*Buna-hegy*,⁵ positioned on a relatively high hill-top, and Sângeorgiu de Mureş–*Gyéra-alja*,⁶ also located on the terrace of the Mureş. Considering the size of the area researched, the settlement at *Shopping City* is currently the largest and best researched of these, allowing observations to be made also on the internal organisation of the prehistoric settlement. Although the settlement has only been partially researched (the rest has been destroyed or lies outside the area affected by the constructions), its features suggest that a relatively large settlement, with an area of over one hectare, can be outlined. At the same time, due to the method of excavation and the damage caused by the mechanical work carried out

² For an overview of the Ariuşd group and its relations with the Cucuteni culture see LÁSZLÓ 1911; NIŢU 1973; SZÉKELY 1987; LÁSZLÓ 1993a; LÁSZLÓ 2006; LÁSZLÓ 2009; LÁSZLÓ–SZTÁNCsUJ 2013; SZTÁNCsUJ 2015.

³ SZTÁNCsUJ 2015, 108–110 and 355, map 2.

⁴ KOVÁCS 1915, 226–315; BERECKI–SZTÁNCsUJ 2011.

⁵ LAZĂR–OPRIŞ 1989, 92–97.

⁶ LAZĂR 1995, 212.

prior to the research, some observations regarding the stratigraphy (especially the existence of possible successive habitation levels) can no longer be made.

As we have detailed in the lines above, most of the discovered contexts represent post holes, observed on the surface of the geological soil. Their layout indicates the existence of at least four rectangular surface dwellings, located mainly in the north-western area of the site. Dwellings 1 and 2, parallel to each other, and 7–8 m apart, are outlined by Cx.34–37, Cx.40–41 (H[ouse]–1), and Cx.47–54 (H–2). Approximately 8 m west of H–1, another row of post holes (Cx.27–31) seems to indicate the layout of H–3, located partially outside the excavated surface. Houses 1 and 2, surveyed in their entirety, had an area of 25 to 40 square meters, both being oriented in the north-east–south-west direction. A smaller rectangular building, of approx. 6–7 square metres, marked by Cx.20–26, was outlined 12 m southwest of H–3. Considering its relatively small size, it can be interpreted as a household context. This structure, together with H–3, had a slightly different orientation from H–1 and H–2, their long axis being oriented more to the north.

Cx.1–Cx.13 were discovered at a considerable distance of 45 m south-east of the group of buildings presented above. Their interpretation is made difficult by the fact that only a narrower strip has been investigated in this area. In this case only the alignment of Cx.7–13 seems to indicate the existence of a dwelling (H–4) similar in shape and size to H–1 and H–2. In the absence of precise chronological data, we cannot establish the connection between the two groups of buildings. They may have functioned simultaneously or at different times during the existence of the Copper Age settlement. A series of pits of various sizes, probably used in household activities (like extracting soil or clay) and later filled with household waste, were also observed near the houses. Together with the

houses, they represent common elements of any prehistoric settlement.

The dwellings discovered at Târgu Mureş show a number of similarities with the constructions investigated in other settlements in south-eastern Transylvania, such as those at Ariuşd–*Tyiszk-hegy*, Bixad–*Vápa-vára*, Malnaş Băi–*Füvenyestető* or Păuleni–*Várdomb*.⁷ These were usually rectangular constructions, built on a structure made up of wooden posts sunk into the ground, with the walls made of a skeleton of pears, stakes and/or boards covered with clay. Their traces are usually preserved not only by the post-holes but also by the wattle and daub agglomerations formed as a result of the (accidental or deliberate) destruction of the house. Although in smaller numbers, the wattle and daub fragments discovered in various contexts or in the culture layer, often bearing the imprints of stakes or boards on the surface, may indicate similar structures in the settlement at Târgu Mureş.

Inside the Copper Age houses, traces of plastered clay or stomped floors and ovens, as well as pottery and other household items can often be unearthed. The rescue nature of the excavations and the research methods applied at Târgu Mureş did not allow such details to be established regarding the structure of the discovered dwellings. No remains of any interior floor or household contexts could be observed and the objects discovered inside, that are directly related to the use of the houses, are generally few. It can be generally stated that the dwellings within the settlement were probably organised in several groups. Their spatial arrangement and orientation indicate the foundation of the entire settlement according to an organised, preconceived plan.

We can also add the fact that most of the settlements located on terraces or hilltops show traces of some kind of fortification. Such defensive arrangements can consist of a simple ditch, intended to protect the entire settlement or a portion of it (e.g. Olteni–*Vármege* or Sfântu

⁷ For an overview of the architecture of the Transylvanian Ariuşd group, see the following works: LÁSZLÓ 1914; LÁSZLÓ 1988; LÁSZLÓ 2000; LÁSZLÓ–COTIUGĂ 2005; SZTÁNCSUJ 2015, 118–127; LÁSZLÓ–SZTÁNCSUJ 2020, 12–19. In relation to similar constructions in the East-European Cucuteni–Tripylia area see LAZAROVICI–LAZAROVICI 2007, 158–245.

Gheorghe–*Gémvára*), but also of a more elaborate fortification system, made up of a ditch (or ditches) reinforced with palisades and fences (Ariuşd, Malnaş Băi).⁸ During the investigations

at Târgu Mureş, no such defensive elements were observed, but taking into account observations from other sites, the existence of a fortification should not be excluded.

THE EVALUATION OF THE FIND MATERIAL

Comparing the amount of material discovered with the size of the area surveyed, the whole assemblage seems rather modest.

The entire material collected during the excavations consists of a number of 1508 artefacts. Most of the objects come from the researched archaeological features (1116 pcs., representing 75%), and the rest from the culture layer (392 pcs., 26%). From a chronological point of view, the overwhelming majority dates back to the Copper Age (1477, representing 98%) while the discoveries attributed to the Middle Bronze Age Wietenberg culture are relatively few in number (31 pcs., 2%). The latter were discovered mainly in the culture layer released during the works, and during the field surveys carried out in the perimeter of the site. In the following we will only present the Eneolithic material. Regarding the conditions of discovery, the proportion of Eneolithic objects is similar to that of the total material, namely 75% (1103 pcs.) from contexts and 25% (374 pcs.) from the culture layer. Of the 56 archaeological features 50 contained archaeological material. Unsurprisingly, most of the finds came from refuse pits found around the houses. Of all the contexts, pits 16, 17, 33, 39, 43 and 44 are particularly noteworthy, containing approx. 70% of the entire material. Especially Cx.39 and Cx.44 were rich in archaeological material (Pl. V/2, 4), consisting not only of sherds but also of some restorable vessels.

Ceramics represent the most numerous category (1250 pcs., 85%), while the rest of the find material consists of wattle and daub fragments (146 pcs., 10%), animal bones (67 pcs., 4%) and a few small finds, namely an anthropomorphic figurine, a clay loom weight and a few stone objects. The relative rarity of small finds

compared to the ceramic material again confirms our observations regarding the particularly affected extent of the site.

Copper Age pottery is almost exclusively associated with the Ariuşd group, but there are also a number of vessel fragments attributable to the Foeni group (Pl. X/10; XI/3). Potsherds belonging to the latter came to light from Cx.44, together with Ariuşd-related material, only their percentage does not reach 1% of the entire assemblage. In general, the pottery is heavily fragmented. Of all the ceramic material collected, there is only one whole vessel and a few more that can be restored. Body sherds constitute approx. 80% of all ceramic material, providing little information on vessel shapes and their chronological assignment. Another conspicuous characteristic of the ceramic material is the extremely low amount of decorative elements, especially the total absence of painted pottery, which is another unusual feature within the Ariuşd group.

The technical quality of the ceramics is generally good. The hand-moulded vessels were made of well-kneaded clay containing few impurities. The paste was degreased with sand and fine gravel and the burn was of good quality. Most of the vessels were fired to a brick, yellowish-brown, brown, or rarely uniformly black colour. Discoloration caused by secondary combustion during use is often observed on the surface of the sherds. In terms of modelling, paste and firing, ceramics are divided into three distinct categories. Fine ceramics, which make up about 12% of the total, consist of vessels moulded from a paste degreased with very fine sand and fired to uniform colours, usually light red or yellowish. Approx. 15% is coarse, roughly modelled pottery. The clay used for

⁸ LÁSZLÓ 1911, 177–183; LÁSZLÓ 1993b; SZTÁNCsUJ 2015, 114–118; LÁSZLÓ–SZTÁNCsUJ 2020, 9–12.

modelling contains more impurities and has usually been degreased with gravel. In rare cases, we also find chaff as a degreasing material in this category. The sherds from this category belong to vessels with thicker walls and the firing is often uneven. Between these two categories there is an intermediate one, present in an overwhelming amount of 70% (approx. 73%). All three categories are characterised by the lack of surface treatment such as smoothing and polishing or coating with slip, and most vessel fragments have a porous surface. As mentioned above, decoration is extremely poor, consisting of a few fingernail impressions (Pl. IX/10; X/7), wave-like impressions under the rim (Pl. X/4) or splattered and organised barbotine (Pl. VI/11). In the case of a fragment from the bottom of a vessel, the imprints of a mat can be observed (Pl. XI/5), which is an indication of the manufacturing technique rather than an ornamental element. Vessel accessories also present a modest inventory, consisting of simple (Pl. VI/12; VII/1, 3, 5–7; X/9, 11) or in some cases perforated (Pl. VI/9; IX/12) buttons and handles (Pl. VI/3; VII/8–10; IX/14; XI/1, 3, 4). These details, as well as the lack of painted decoration, constitute the distinctive features of the material from Târgu Mureş.

As we have already shown, the shape of the vessels can only be established to a rather limited extent due to fragmentation. Based on the rim and base fragments, some accessories (handles, buttons) and decorative elements, there are still some identified vessel forms, which are the only clues for the chronological classification of the discovered material.

Cups and mugs with bitronconic (Pl. IX/7; X/1, 5) or slightly arched body (Pl. VI/8; VII/3–7; IX/7) are present in a relatively large amount. Among them we find the only vessel preserved in its entirety (Pl. VII/2). This small cup is typical of settlements belonging

especially to the early phase of the Ariuşd group, but it also occurs in the later, „classical” period.⁹ The most numerous in the studied material are the forms with an arched body and a slightly inverted rim, provided with buttons applied to the body (Pl. VII/3–7). Analogues of this type are known especially from the classical and late phases (although they are not absent from the early phase either) but, unlike the specimens from Târgu Mureş, most of them are decorated with incised or impressed motifs.¹⁰ Numerous sherds belong to the so-called “amphorae” with a bulging shoulder, provided with large handles (Pl. VII/10; VIII/1; IX/14; XI/1, 2, 4); relatively large jars and storage vessels with rounded shoulders and narrow rims (Pl. VI/10, 11, 13; XI/9), provided with buttons and handles on the body (Pl. VI/12; VII/8), sometimes decorated with splattered barbotine (Pl. VI/11); simple pots with curved profile and slightly inverted rims (Pl. VI/1; IX/9; X/3, 4); as well as two bowls with large, inverted (Pl. VII/1) or slightly everted rim (Pl. X/8; XI/8). Also typical of the studied cultural group are the high pedestals with cylindrical bodies, provided with large ventilation holes under their rim (Pl. IX/1–4). A single fragment comes from a lid with a cylindrical button-handle on the top (Pl. VI/5), while several handle fragments belong to clay spoons (Pl. VI/6; VIII/6, 7). Most of the above-mentioned forms are common elements of the ceramic inventory of the Ariuşd group, especially in its early and classical phase.¹¹

Less common forms with analogues in some of the contemporary settlements also occur. The fragment of a vessel with a cylindrical bottom (Pl. VIII/3) has a rare analogy in the material from the eponymous settlement of Ariuşd–*Tyiszk-hegy*¹². The absence of so-called leading forms should be also noted, such as vessels with a globular body and short neck, bitronconical pots with a shoulder decorated with channel

⁹ SZTÁNCSUJ 2015, pl. LVII/11; LXVII/1, XCVII/4 (Ariuşd); CXII/6 (Bod–Priesterhügel); CXXXIX/2 (Leţ–Vârhegy); CLIII/1, 2 (Odorheiu Secuiesc–Budvár); CLXII/1, 5, 7, 12, 13; Olteni–Vârmege); CLXXV/5, 7 (Petriceni–Polyvár); CCXII/1 (Turia–Karatna–Templomláb).

¹⁰ SZTÁNCSUJ 2015, pl. CI/1, 6 (Ariuşd–Tyiszk-hegy); CXLVII/7–9 (Mugeni–Pagyvan-tető); CLVI/1, 2 (Moacşa–Maksahát).

¹¹ For analogies to these types see LÁSZLÓ 1927, 5–20, pl. I–X (types A–J); SZTÁNCSUJ 2015, 156–179, fig. 67–70, 72, 73 (types A–G).

¹² LÁSZLÓ 1927, pl. II/9.

motifs, high pedestaled bowls or bell-shaped lids. Generally speaking, the inventory of forms is much poorer compared to other contemporary settlements in south-eastern Transylvania.

As regards the sherds attributed to the Foeni group, these are fragments of vessels made of very good quality paste, degreased with fine sand and fired to a brick colour with black spots. They belong to a few bitronconical bowls (Pl. X/10), and to a vessel with a rounded belly, and a horizontal handle (Pl. XI/3). Similar forms can be found in the settlements of the Foeni group in south-western Transylvania.¹³

Small finds are also extremely rare. In this category we include the fragment of the lower part of a (probably) anthropomorphic figurine discovered in Cx.39 (Pl. VIII/5). It is a cylindrical piece with a disc-shaped base, rather superficially modelled. Similar objects, interpreted as idols, anthropomorphic figurines can be found for example at Ariuşd–*Tyiszk-hegy* or Olteni–*Vármege*¹⁴. Like the specimen from Târgu Mureş, these were usually found within the settlement, from a profane (houses, refuse pits) rather than a ritual context. A miniature vessel came to light from Cx.44 (Pl. IX/1), whose form is very common in many settlements in south-eastern Transylvania.¹⁵ From the material discovered in the culture layer comes an ellipsoidal burnt

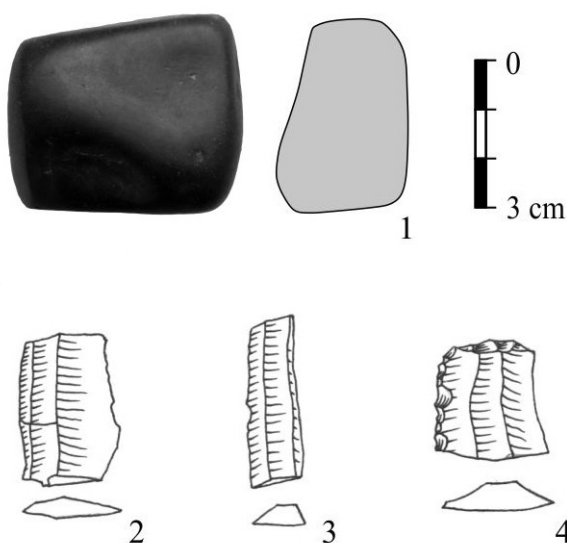


Fig. 3. Stone artefacts from the Copper Age settlement.

clay weight, provided with a hole for suspension (Pl. VI/7).

The few stone objects from Târgu Mureş–*Shopping City* come almost exclusively from the culture layer, thus not from a clear context. Most of them are sandstones with traces of processing, as they were probably used in household activities. More important to mention is a cubic shaped, polished stone grinder with rounded edges, made of black rock, probably of volcanic origin (Fig. 3/1). Last but not least, there are three chipped and retouched blades made of grey basalt and reddish-brown flint (Fig. 3/2–4).

CHRONOLOGY

The chronology of the Cucuteni culture is based on Hubert Schmidt's tripartite periodization, which was later supplemented by Romanian archaeology during the last century.¹⁶ The chronological position of the three main phases (A, A-B and B, with several sub-phases), established on the basis of stylistic and stratigraphic observations, was later refined using a series of

radiocarbon data. Based on the available absolute chronological data, the Cucuteni A phase is dated mainly between the 46–42th centuries cal BC (4600–4100 cal BC), the A-B phase to the interval between 4100–3900 cal BC, while the late Cucuteni B period in the 36–37th centuries cal BC (4700–4500 cal BC).¹⁷

The chronological position and internal

¹³ See GLIGOR 2008, pl. 1–4 (Petreşti–*Groapa Galbenă*); GLIGOR 2009, pl. LXXXVIII/4, 5; LXXXIX/1, 2, 4; CXXV/1–7 (Alba Iulia–*Lumea Nouă*).

¹⁴ See SZTÁNCSUJ 2015, pl. CCXX/6 and CCXXIII/9.

¹⁵ SZTÁNCSUJ 2015, pl. CXIII/5, 6 (Bod–*Priesterhügel*); CCXV/6 (Olteni–*Vármege*).

¹⁶ See mainly SCHMIDT 1932; VULPE 1957; DUMITRESCU 1963a; DUMITRESCU 1963b; NIŢU 1984.

¹⁷ MONAH 1987; MANTU 1995; MONAH–MONAH 1997, 45–47; MANTU 1998, 93–133; LÁSZLÓ 2006; LÁSZLÓ 2009; POPOVICI–DRAŞOVEAN 2020.

Nr.	Lab no.	Context	Age ¹⁴ C (BP)	Standard deviance (±)	1 σ calibration (cal BC)	2 σ calibration (cal BC)
1	ROAMS 2371.10	Cx.42	5735	35	4657–4506	4687–4462
2	ROAMS 2372.10	Cx.43	5793	30	4703–4609	4716–4549

Table 1. Radiocarbon data from the Copper Age settlement.

periodization of the Ariuşd group from Transylvania is mainly based on the analysis of ceramics, and on the presence of various types of painted decoration in relation to their stratigraphic position and the comparison of these data with the relative and absolute chronology established for the Cucuteni culture.¹⁸ According to current knowledge, the evolution of the group can be broadly divided into three phases, of which the early (Ariuşd I) corresponds to the A1 stage of the Cucuteni culture, the second/classical (Ariuşd II) to the Cucuteni stages A2–4 and A–B, and the late (Ariuşd III) to the end of phase A–B and (possibly) the beginning of phase B.¹⁹ Painted decoration is present in all three periods, but to a lesser extent in the first period and to a very small extent during the late phase. As showed in the previous chapter, the analysis of the pottery forms from Târgu Mureş does not allow a very precise chronological framing of the settlement. In general, the ceramic forms are mostly found in the early and classical phases of the Ariuşd group. However, the absolute chronology data seem to support an early dating of all the material.

Two animal bone samples were sent for radiocarbon dating to the Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering in Măgurele, Ilfov.²⁰ The calibration of the radiocarbon data was made with the online version of OxCal v.4.4.4. The measurement results are presented in table 1 and fig. 4, respectively. The first sample was collected from Cx.42, an oval-shaped pit in the north-eastern area of the excavated zone, in the vicinity of H–1. The ¹⁴C-AMS measurement for this provided the

5735±35 BP data, while the calibrated data gave a 68.3 % probability (1-σ) for a dating between 4657 and 4506 cal BC, which corresponds to a 95.4 % probability (2-σ) for a dating between 4687 and 4462 cal BC. The second sample was chosen from the faunal material discovered in Cx.43, a large circular pit located just south of Cx.42. The sample yielded a radiocarbon measurement of 5793±30 BP, calibrated to the span of 4703 and 4609 cal BC for 1-σ, or 4716 and 4549 cal BC for 2-σ.

Although the two radiocarbon dates do not allow us to draw very precise chronological conclusions, given the size of the settlement and the large number of archaeological features, we can note that these data seem to indicate a fairly long timespan between the 47th–46th centuries cal BC for the existence of the settlement. If we compare this to the few known from other settlements of the Ariuşd group, the two dates from Târgu Mureş seem to be the earliest in the entire studied area.

Unlike the Cucuteni culture, the absolute chronology of the Ariuşd group is so far based only on a small number of radiocarbon dates obtained for the settlements of Malnaş Băi–Füvenyestető and Păuleni–Vărdomb.²¹ These data refer mainly to the classical phase of the group and generally place it in the second half of the 5th millennium BC.²² At Malnaş Băi, for example, the most precise dating refers to the second habitation level, classified in the Ariuşd II phase, and places it in the period between 4460–4244 cal BC. The radiocarbon data of the earlier settlement level (I) at Malnaş Băi cannot be considered relevant, but on the basis of the

¹⁸ LÁSZLÓ 1927; SZÉKELY 1965; NIŢU 1973; SZÉKELY 1973; SZÉKELY 1987; LÁSZLÓ–SZTÁNCZSÚJ 2013.

¹⁹ See SZTÁNCZSÚJ 2015, 255–282, Tab. 6 and 8.

²⁰ The authors would like to thank Dr. Corina Anca Simion for her help in the PAC application and the logistics of the measurements.

²¹ LÁSZLÓ 2006; LÁSZLÓ 2009 (Malnaş Băi); WHITLOW ET AL. 2013 (Păuleni).

²² For a re-evaluation of radiocarbon dating of the Ariuşd sites from south-eastern Transylvania see: POPOVICI–DRAŞOVEAN 2020, 345–347, 350.

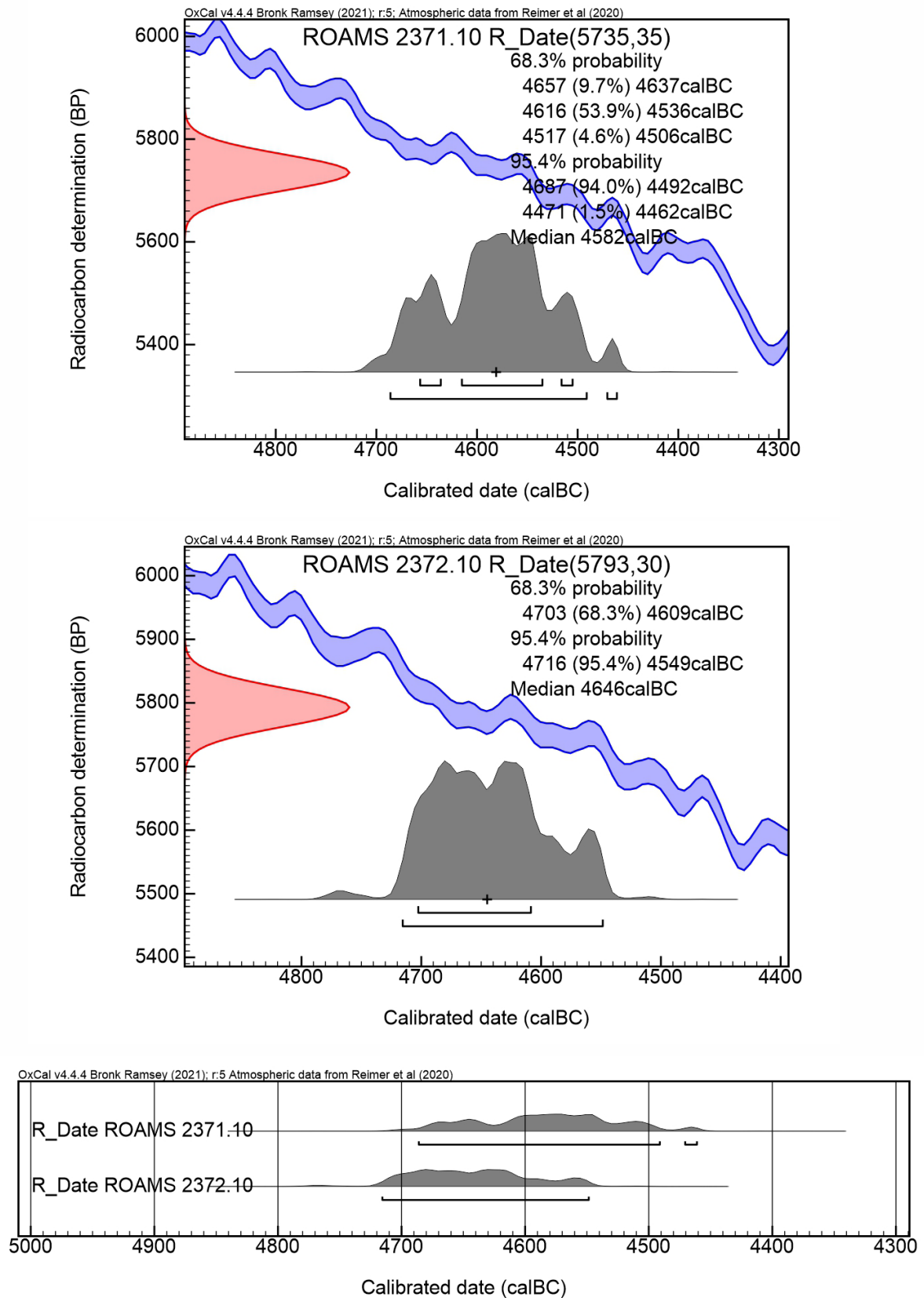


Fig. 4. Radiocarbon dates from the Copper Age settlement.

stratigraphic situation, it can be assumed that the settlement belonging to this level already existed before the middle of the 5th millennium cal BC. This assumed dating is partially consistent with the synchronisms demonstrated with the Precucuteni III-Cucuteni A1 period on the territory of Moldavia (Bonțești, Izvoare II1a–1b or Poduri–Dealul Ghindaru).²³ Based on radiocarbon data from Poduri, the settlements or habitation levels from this period are generally dated to the 46th–47th centuries BC. Assuming that the measurement data of the Târgu Mureș samples are relevant, the dating they propose does not deviate much in time from the dating of the Cucuteni A1 phase. Although they are too few to establish detailed cultural connections, the presence of Foeni imports within the settlement also seems to support an early dating. Without going into details, we note that the

radiocarbon dating carried out for this group in western Transylvania and the Banat area indicates its existence in the timespan between 4750–4450 cal BC.²⁴

Of course, we can also add that the absence of painted pottery is not necessarily of chronological significance. It may be due to some physical effects of the soil, but may also be explained as a regional feature within the studied cultural group. Recent research, supported by radiocarbon dating, also seems to indicate that the differences observed in terms of the decoration of the ceramics could be interpreted, at least partially, as regional stylistic aspects throughout the distribution area of the Ariușd–Cucuteni–Trypillia cultural context.²⁵ Further research is definitely needed to clarify these problems. The research of the still untouched parts of the site may one day provide answers to the remaining questions.

CONCLUSIONS

The rescue archaeological excavations carried out by the Mureș County Museum in 2018 brought to light, on the south-eastern outskirts of the city, the remains of a settlement attributed to the Ariușd cultural group of the Early Copper Age. The habitation traces, consisting mainly of the remains of at least four surface dwellings and refuse pits, belong to a large settlement of more than one hectare. A considerable amount of archaeological material, made up of ceramics, wattle and daub fragments, faunal remains and some small finds (clay artefacts and lithic implements), was recovered from within the total of 56 researched features. Unlike the pottery from other Ariușd settlements, the analysed material is notable for the absence of decoration (especially painted), which makes its chronological classification difficult. However, based on the comparative analysis of the ceramic forms, the settlement can be classified in the initial phase (I) of the Ariușd group. The radiocarbon analysis of the bones collected from two contexts

(Cx.42 and Cx.43) seems to indicate a relatively large timespan for the existence of the settlement, in the second third of the 5th millennium BC (4687–4462 and 4716–4549 cal BC, 2 σ). We have shown that, although these dates may seem early at first glance, compared to the radiocarbon data available for the earliest, A1 phase of the Cucuteni culture, and taking into account the imports from the western Transylvanian Foeni group, it seems possible that they are also relevant for the initial phase of the Ariușd group.

²³ MONAH–MONAH 1997, 46.

²⁴ GLIGOR 2009, 141–144.

²⁵ LÁSZLÓ 2006, 12–23.

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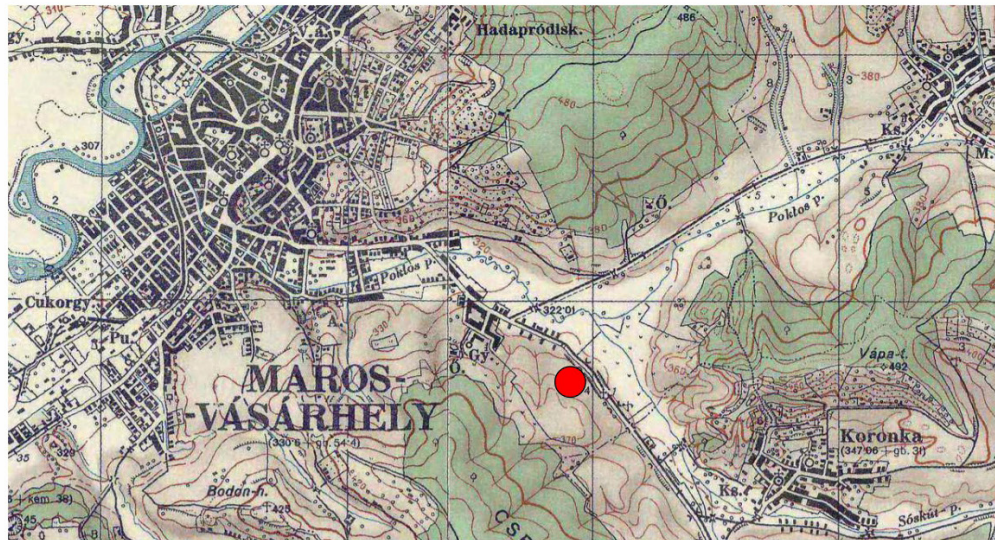
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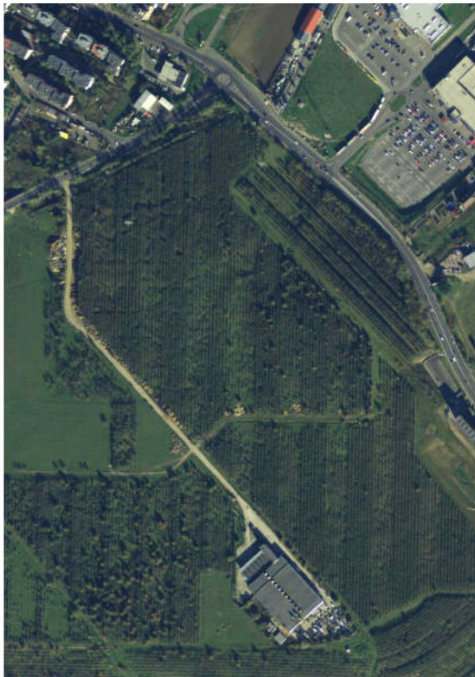
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1



2

Plate I. Târgu Mureș–Shopping City. 1. Location of the site on the Military Survey of Hungary from 1941; 2. Orthophoto plan of the site before and during the construction work.

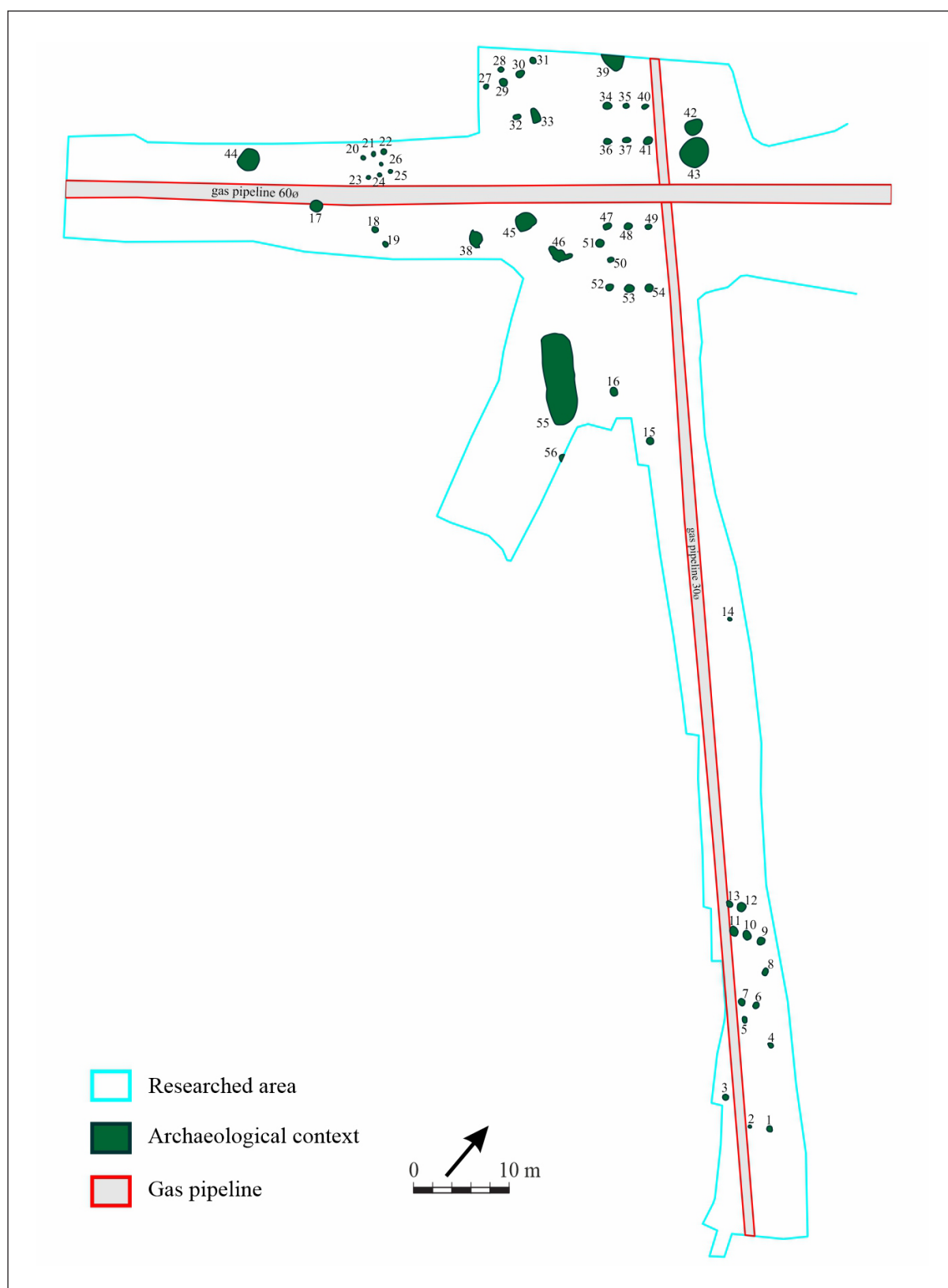


Plate II. Târgu Mureş–*Shopping City*. Plan of the researched area and the archaeological contexts.

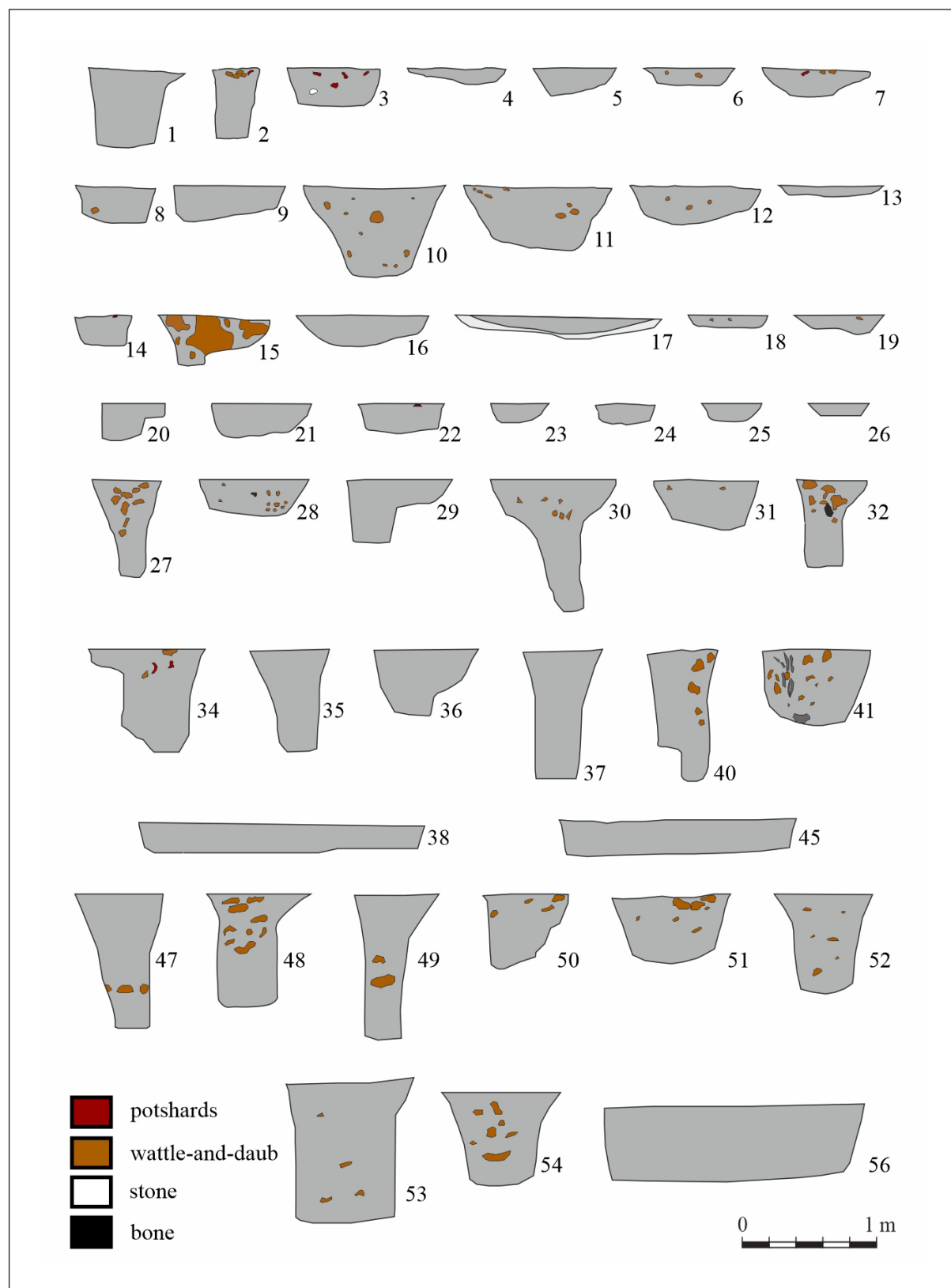


Plate III. Târgu Mureș–*Shopping City*. Cx.1–32, Cx.34–38, Cx.40–41, Cx.45, Cx.47–54 and Cx.56.

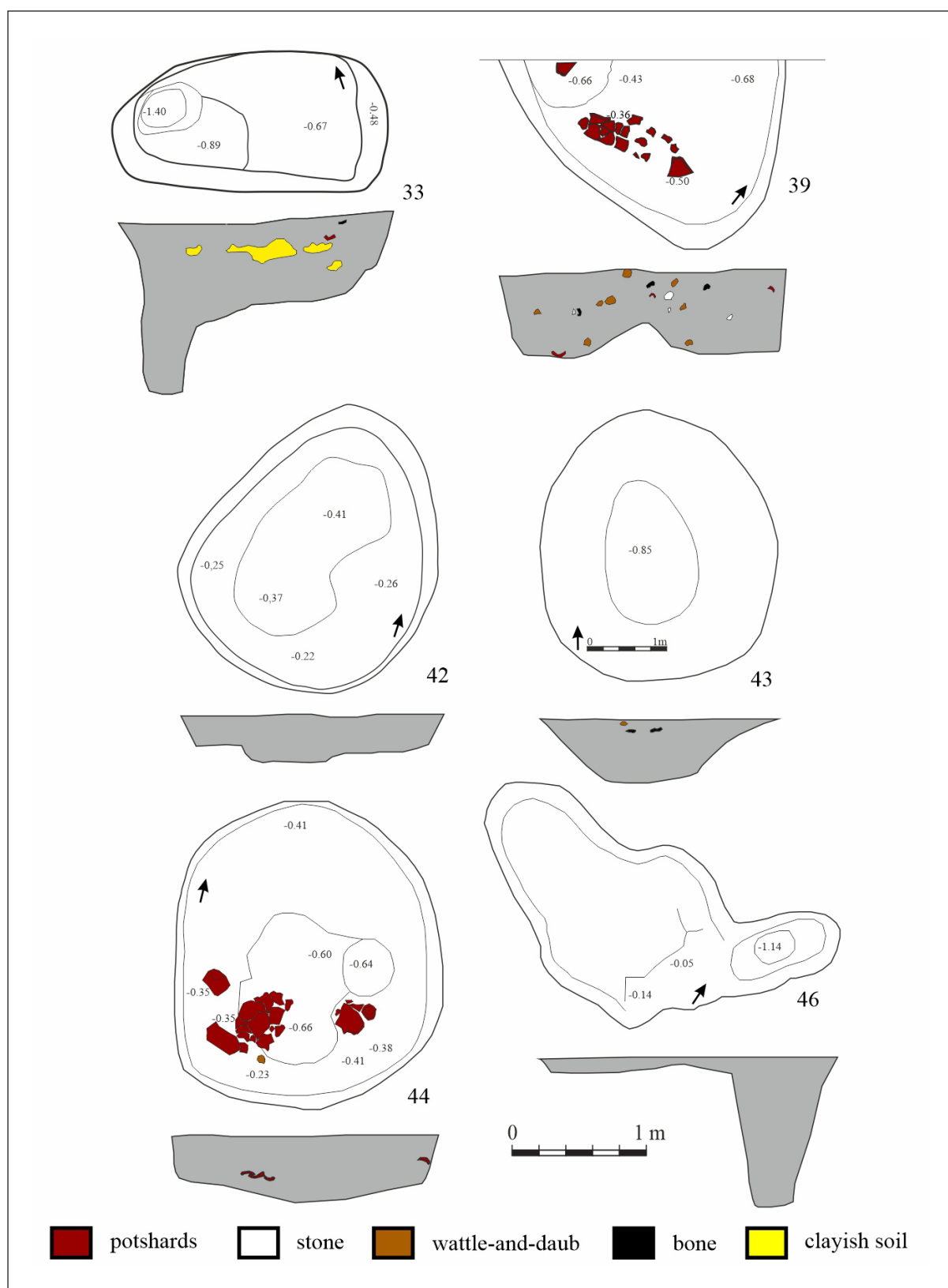


Plate IV. Târgu Mureș–Shopping City. Ground plan and profiles of Cx.33, Cx.39, Cx.42–44 and Cx.46.

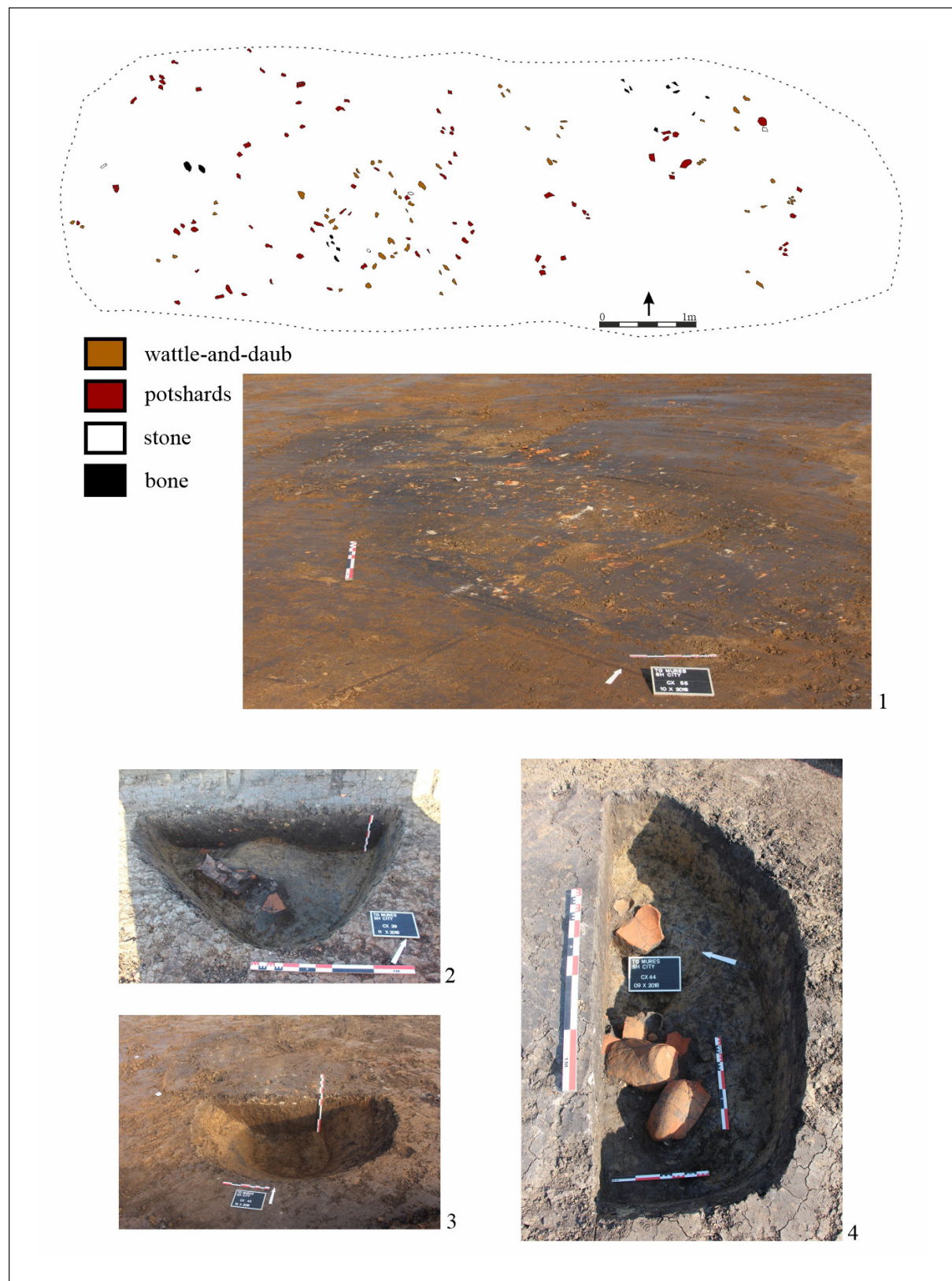


Plate V. Târgu Mureș–*Shopping City*. 1. Cx.55; 2. Cx.39; 3. Cx.43; 4. Cx.44.

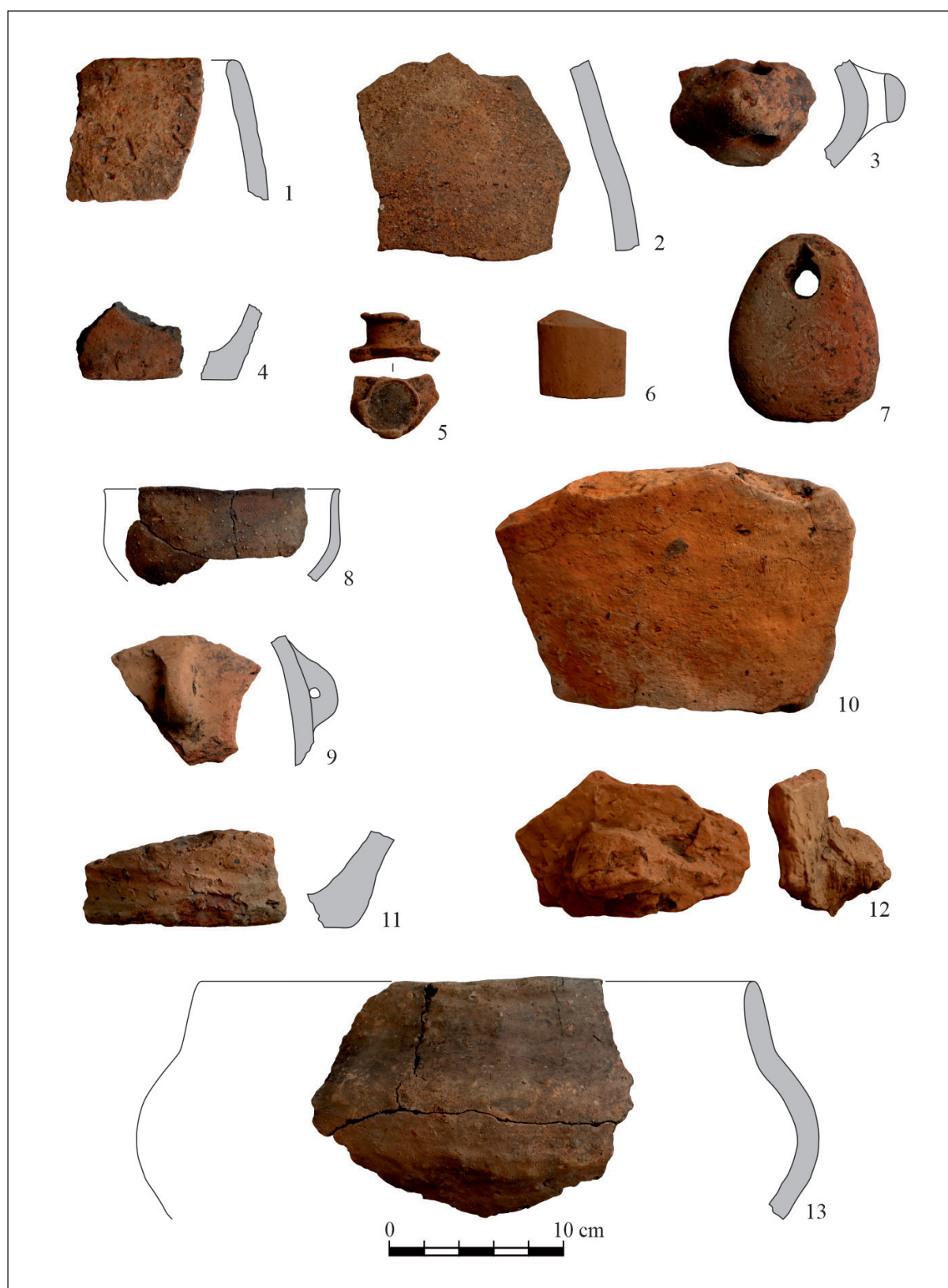


Plate VI. Târgu Mureş–Shopping City.

1–7. Copper Age finds from the culture layer; 8. Cx.7; 9. Cx.16; 10. Cx.28; 11–13. Cx.39.

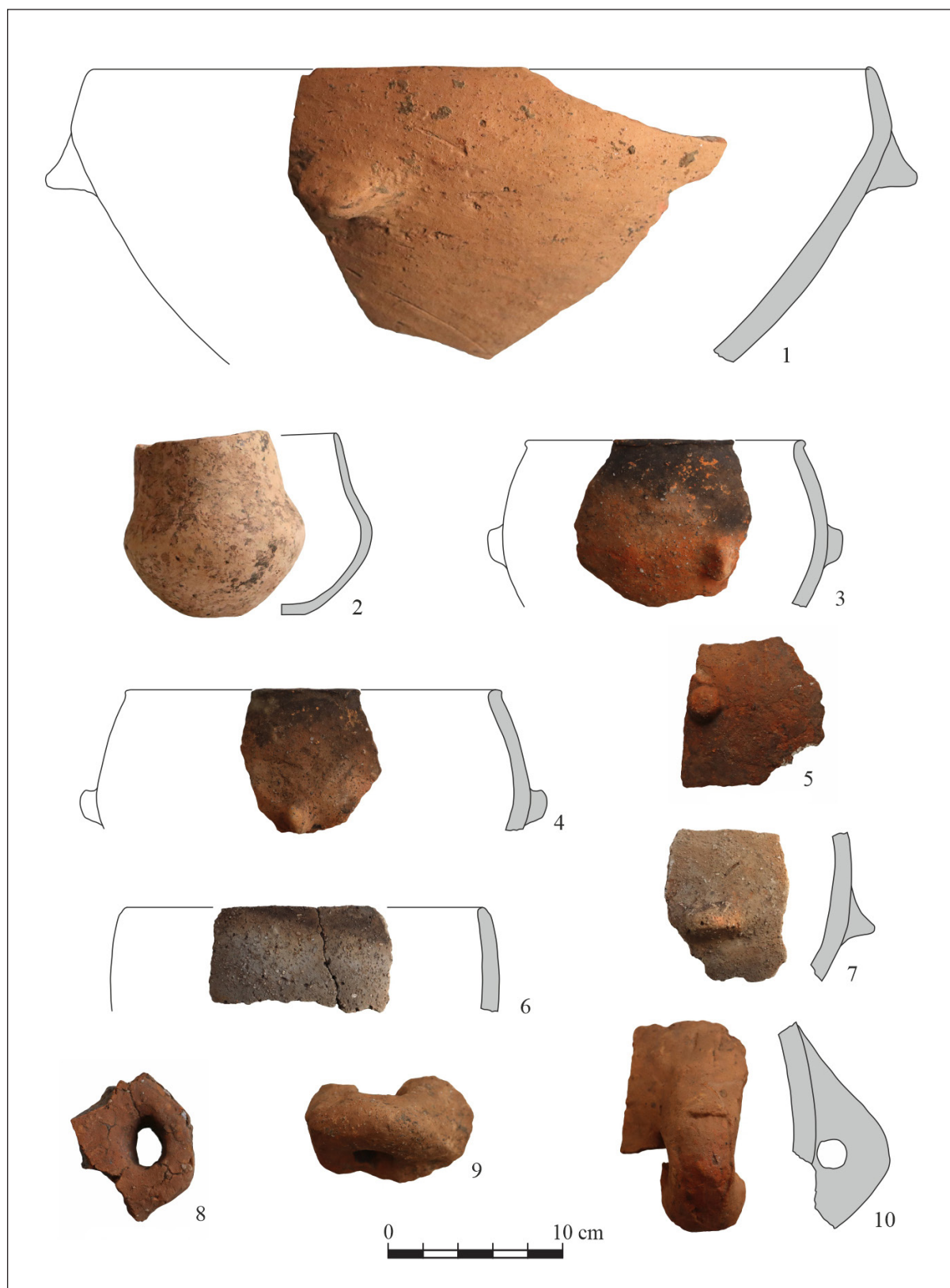


Plate VII. Târgu Mureș–*Shopping City*. Copper Age finds from Cx.39.

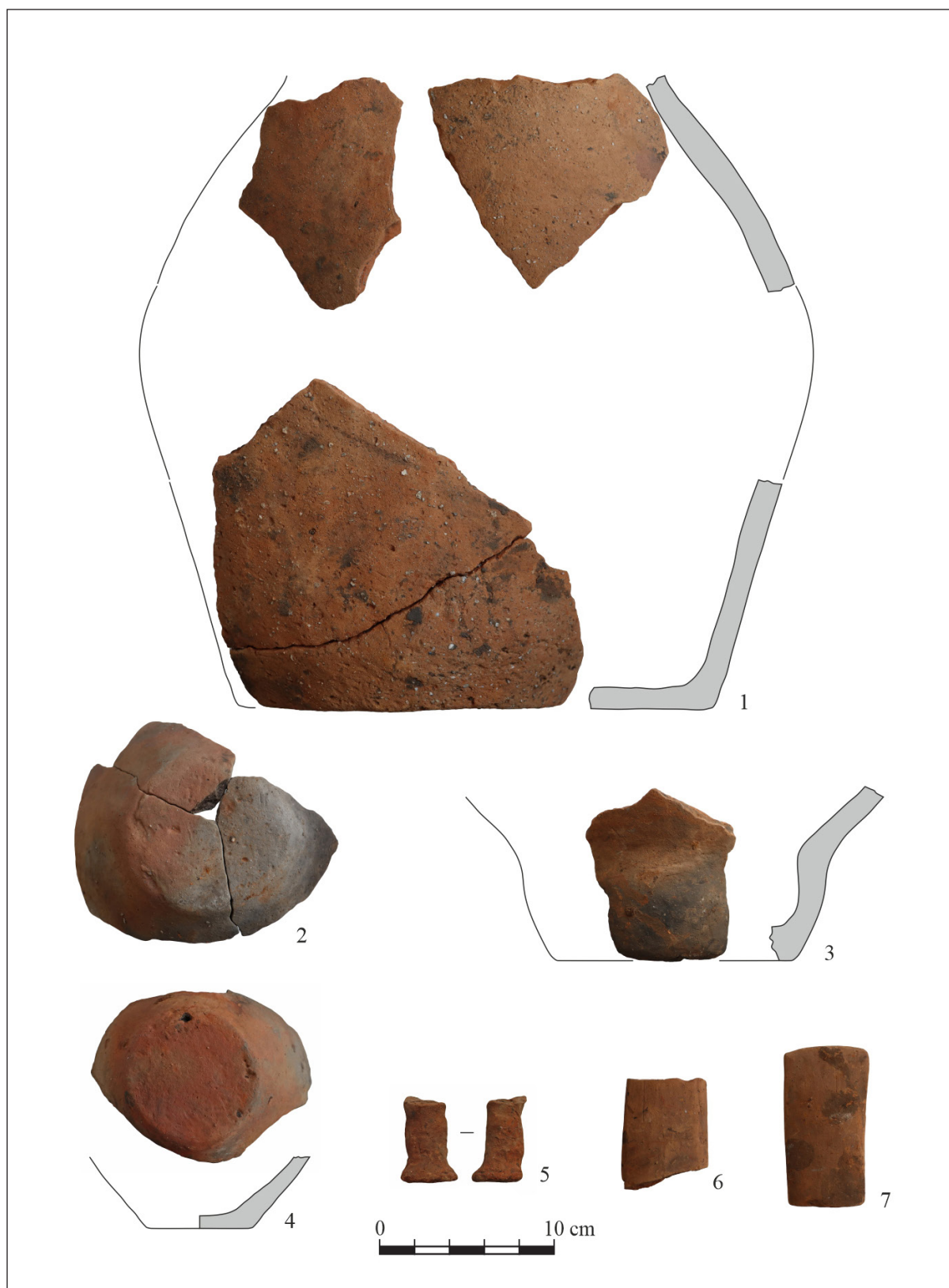


Plate VIII. Târgu Mureș–*Shopping City*. Copper Age finds from Cx.39.

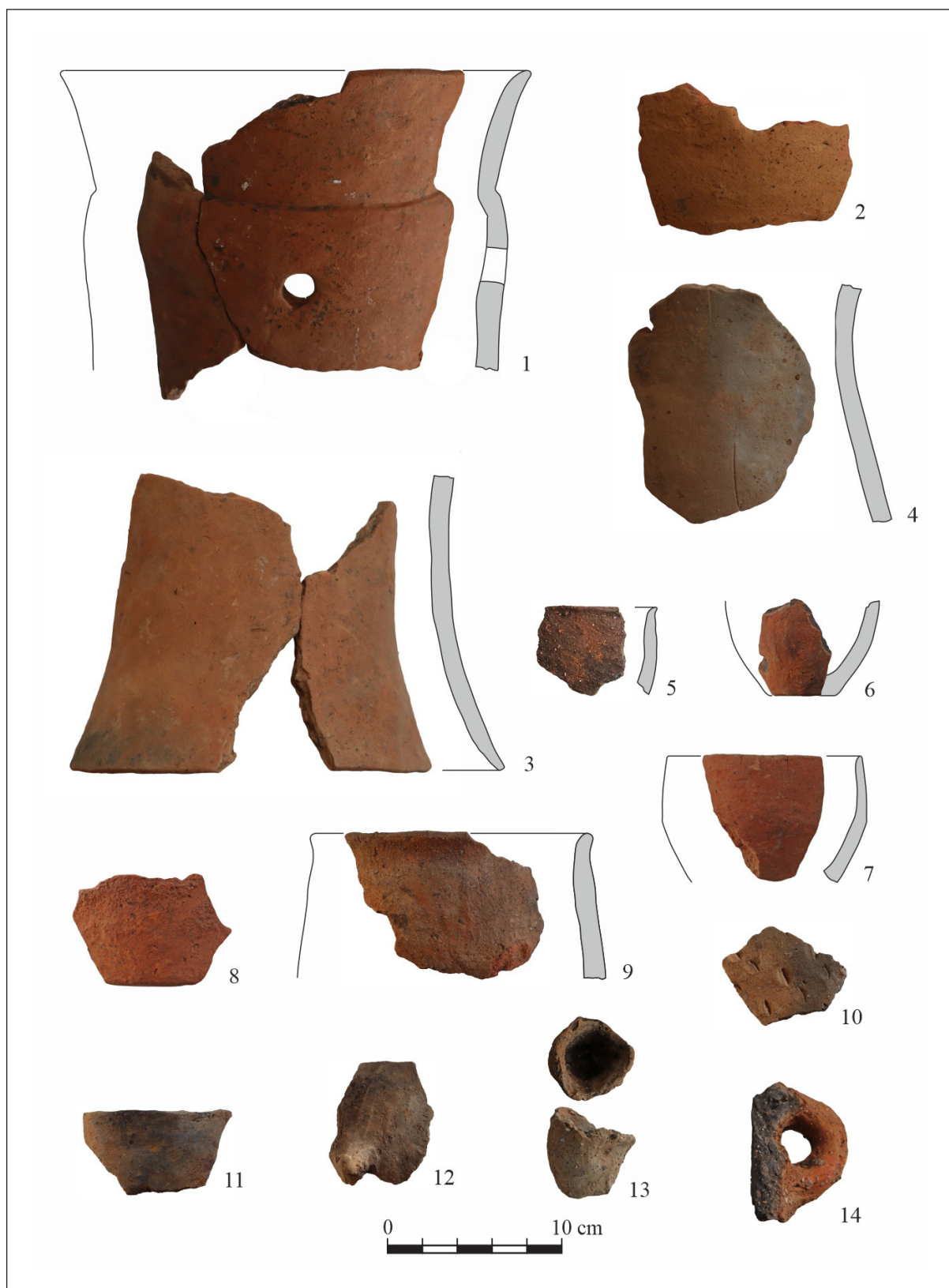


Plate IX. Târgu Mureș–*Shopping City*, Copper Age finds. 1–4. Cx.39;
5. Cx.41; 6–8. Cx.42; 9–12. Cx.43; 13–14. Cx.44.

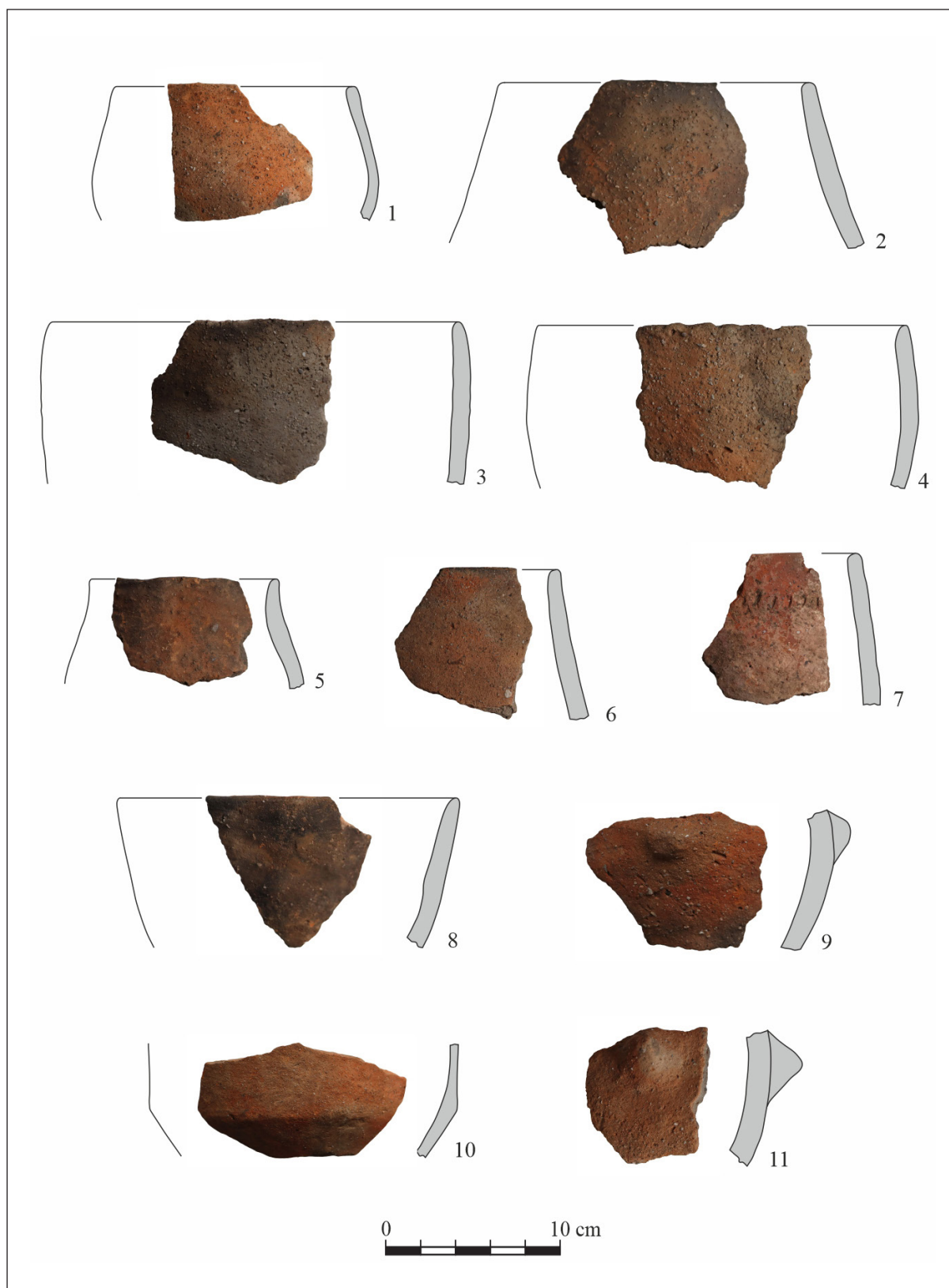


Plate X. Târgu Mureș–*Shopping City*. Copper Age finds from Cx.44.

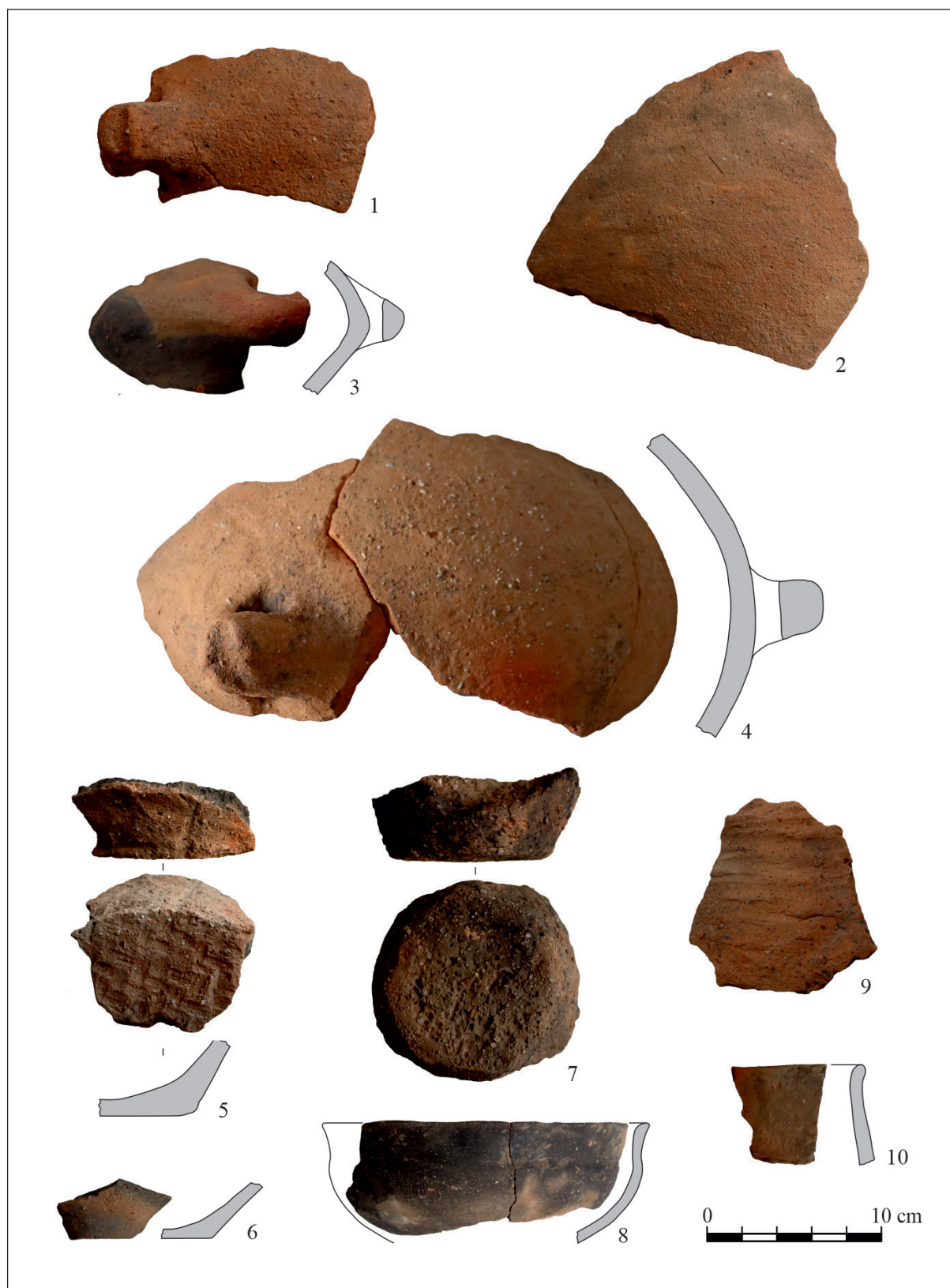


Plate XI. Târgu Mureș–*Shopping City*, Copper Age finds. 1–7. Cx.44; 8. Cx.45; 9. Cx.55; 10. Cx.56.

LATE BRONZE AGE BURIALS FROM THE ARCHAEOLOGICAL SITE OF ODORHEIU SECUIESC–KADICSFALVI RÉT/ ALSÓLOK, HARGHITA COUNTY, ROMANIA

ZOLTÁN-JÓZSEF BOTHA*

The paper presents the Late Bronze Age archaeological discoveries of Odorheiu Secuiesc–Kadicsfalvi rét/ Alsólok. The burials and connected features are characteristic to the Late Bronze Age Noua culture, however several elements of the Middle Bronze Age Wietenberg culture can also be observed. In this respect the paper analyses the chronological aspects and the character of the transition between the two cultures.

Keywords: Wietenberg culture, Noua culture, Late Bronze Age burials, transition from Middle Bronze Age to Late Bronze Age, chronology, material culture

Cuvinte-cheie: cultura Wietenberg, cultura Noua, morminte din epoca bronzului târziu, tranziție de la epoca bronzului mijlociu la epoca bronzului târziu, cronologie, cultura materială

The town of Odorheiu Secuiesc (Hung. Székelyudvarhely) is located on the eastern-south-eastern edge of the Transylvanian Basin, on the eastern border of the Târnava hillside, along the upper course of the Târnava Mare River in the Odorhei Basin, in the southwestern part of Harghita County (Pl. I/1). The archaeological site is located on the northern-northeastern edge of the town, in a former agricultural area. Archaeological excavations (Pl. I/2)¹ prior to the construction of the planned industrial zone revealed the settlement features of a 3rd–4th century Gothic village, and contexts belonging to

the Middle Bronze Age Wietenberg culture,² as well as burials of the Noua culture and surrounding objects appearing as stone platforms and culture layers on the northwestern edge of the site.³ During the past decades, in the upper course of the Târnava Mare River, archaeological sites with Wietenberg III and Noua I cultural elements have been identified: Șimonești–Som-áj,⁴ Eliseni–Lód temető,⁵ Cris-turu Secuiesc–Timaľfalva (Csorgó).⁶ Noua fragments have been found in Șimonești–Csere alja⁷ and at a topographically unidentified site in Mărtiniș.⁸ Noua graves and cemeteries were not

¹ The excavations were led by András Sőfalvi. They began in 2008 and, with a few interruptions, continued until 2020.. KÖRÖSFŐI ET AL. 2010.

² The major part of the context belonging to the Wietenberg culture was found at the edge of the floodplain of the Târnava River dug into the gravel subsoil, while the contexts of the Noua culture appeared in the contemporary brownish humus and yellowish clayish subsoil.

³ This study discusses the relationship and chronological classification of the Noua burials and the related archaeological features found in their surroundings. In the absence of radiocarbon data, the absolute chronology of other sites was used and compared with the results of this excavation in order to establish a more accurate chronology.

⁴ BENKŐ 1992, 144–145.

⁵ BENKŐ 1992, 202–203.

⁶ BENKŐ 1992, 180–181.

⁷ BENKŐ 1992, 146.

⁸ REP. ARH. HARG. 2000, 134.

previously known from this region. The Middle Bronze Age Wietenberg III period is better represented in the region, showing a dense

habitation and population of the upper course of the Târnava Mare River.

STRATIGRAPHY, RELATIONSHIP OF FEATURES AND CIRCUMSTANCES OF FINDS

During the excavations, large areas were opened. After mechanical humus removal and manual pruning, we carried out the surface documentation of the uncovered features (photography, surface drawing). Manual disassembly, drawing and photo documentation followed in the next stage. The overturned soil, 1.5 meters thick, as well as the contemporary humus layer and, in some places, the undisturbed subsoil under the eroded soil, accumulated on the Bronze Age surface of the nearby smaller hill over the following millennia, into which the Noua objects and the objects related to the Wietenberg culture found nearby were dug. These are located on the northwestern/western edge of the site (Pl. II).

Stone platforms, graves and cultural layers belonging to the Noua culture were found in surfaces 6 and 9. Context nr. 352 (Pl. III/1–2), uncovered in surface 6, is a larger-sized surface formed of quarry stones with an amorphous shape measuring 9×6 m. In their excavated state, the stones clustered to form surfaces in three parts. A large number of in situ crushed pot shards and hand-made pottery fragments were found among the stones. (It turned out during the processing of the material from the surface that this was a cultural layer, created during the preparation of stone-packed graves and was related to Context 619, the cultural layer, as well as to Contexts 397, 398 and 616).

Context nr. 353 (Pl. III/3–4) was also found in surface 6. It was a shallow grave (15–20 cm deep) with a southwest-northeast orientation and a rectangular burial pit with rounded corners. The poorly preserved skeleton was lying on its right side, in crouched position, with the legs pulled up to the pelvis, the arms bent over the right shoulder, the skull slightly crushed and turned to the southeast. Three hand-made vessels were placed near the skeleton on the southeast side of the burial pit. The burial was not dug down to the clay layer.

Context 397 (Pl. IV/1–3) was uncovered at the northwestern corner of context 352 and turned out to be a separate burial. A mound of river pebbles was built over the grave, containing the southwest-northeast facing skeleton of an adult female(?) lying on her left side in a crouched position. The skull was turned to the left and faced northwest. The left arm was extended along the body, the right arm placed across the abdominal area, sinking between the ribs and vertebrae, and the legs were slightly pulled up under the pelvis. A small vessel with a knobbed lid was placed next to the right shoulder, a conical vessel with a knobbed handle and a food accompaniment consisting of animal bones was placed under the legs. Both the skeletal remains and the vessels were partially absorbed. The vessels were slightly crushed under the weight of the overlying soil.

Context 398 (Pl. V/1–2), south of cultural layer 352, appeared to be a stone-covered burial similar to 397. However, no evidence of a burial was found during the excavation, suggesting that it was a cenotaph.

Context 615 (Pl. V/3–4) was a single-layered surface of spherical stones. No traces of excavation were detected during uncovering; Bronze Age pots were found among the stones.

Context 616 (Pl. V/5–6), a surface consisting of irregularly shaped river pebbles was found at the prehistoric walking level. Among the stones and their surroundings, a large amount of pottery and decayed bone traces were observed. After removal, we saw no sign of digging underneath.

Context 619, a cultural layer, was located in an irregular spot 10–20 cm deep among the stone surfaces and to their east. After removal, it turned into a dark brown clean subhumus, from which a significant amount of prehistoric pottery, flint and a poorly preserved bronze knife were uncovered. The layer was presumably

formed during the digging of the stone surfaces and burial pits, probably from the material of

the Wietenberg settlement during the time of the Wietenberg culture.

DESCRIPTION OF FINDS

Artefacts associated with the Noua burials

Burial no. 353

1. Small-sized, almost entirely preserved cup of grayish-brown color, fine, well-smoothed surface, partially weathered outer surface, made from clay tempered with sand and gravel, with reduction firing, rounded rim, equipped with two high swinging spherical handles, rounded bottom. Dimensions: height: 6 cm, rim diameter: 7 cm, wall thickness: 0.6 cm (Pl. VI/2). It corresponds to the Sava IB5 type, yet it is also related to the IC1 and possibly to the IB1 types.⁹

2. Remains of a medium-sized bag-like pot, types VIIIB or VA in Sava's typology,¹⁰ placed upside down in the grave, the bottom of the vessel was destroyed during mechanical scraping. It is of a reddish-grey color, oxidizing firing, tempered with gravel, rough surfaced, rounded rim, slightly globular body, decorated with four symmetrically placed finger-tip impressed ribs under the rim. Dimensions: largest remaining height: 14,5 cm, rim diameter: 16 cm, wall thickness: 1 cm (Pl. VI/3).

3. Remains of a biconical bowl. The rim and upper part of the vessel have been destroyed during mechanical uncovering. Its color is grey, it was made by reduction firing, tempered with sand and small pebbles, well-smoothed surface, the beginning of a slightly everted neck can be observed on the upper part, which may indicate an everted rim, there are bundles of narrow diagonal cannelures evenly distributed on the shoulder of the vessel. Dimensions: remaining height 11 cm, diameter of the upper part 16 cm, bottom diameter 9 cm, wall thickness: 0.6 cm (Pl. VI/1). In Sava's typology, the shape corresponds to the ID2 type, while the decoration is pattern KLVA 3.¹¹

Burial no. 397

4. A biconical kantharos type vessel, Sava's IA3 type.¹² It is reddish grey, made from clay tempered with sand by reduced firing, well smoothed surface, its bottom is flat, it has an outwardly curved rounded rim and high swinging handles with knobs. The dimensions of the vessel: height: 12.5 cm, rim diameter: 12.5 cm, bottom diameter: 8 cm (Pl. V/2).

5. Small-sized pot with a globular body and a narrowed mouth, probably Sava's XA type.¹³ It is a grayish-brown vessel with a rounded rim, and a flat bottom, well-smoothed surface, two pierced horizontal knob handles on the shoulder and a flat pierced lid, made by reduction firing, tempered with small pebbles and sand. The dimensions of the vessel: height: 10 cm, rim diameter: 8 cm, bottom diameter: 7 cm. The dimensions of the lid: 12.5×9.5 cm (Pl. V/1).

The finds from the stony surfaces and cultural layers around the Noua burials

Context 352 is directly related to the Noua burials, it is located in their immediate vicinity. A large number of crushed vessel remains were uncovered from the surface.

The most important finds from the context:

1. Fragments of a cup with high pointed handle, tempered with fine sand. Its color is reddish-grey, it was made by reduction firing, it has a well-smoothed surface, globular body, slightly inverted cylindrical neck, rounded rim, slightly rounded bottom. The dimensions of the vessel: rim diameter: 7 cm, base diameter: 4 cm, width: 0,3 cm.

2. Wall fragment of a vessel made from clay, tempered with fine sand, the surface was light

⁹ SAVA 2002, 80.

¹⁰ SAVA 2002, 83.

¹¹ SAVA 2002, 74.

¹² SAVA 2002, 79.

¹³ SAVA 2002, 49.

brown, reduction firing, middle surface technique, decorated with comb impressed and incised line decoration, width of the fragment: 0,8 cm.

The majority of the ceramic material found in the context consists of rough small, medium, and large pieces, tempered with pebble, medium and rough surfaced, as well as a few well-smoothed, red, greyish-brown or grey fragments from storage pots and bag-like pots. Some fragments were decorated with diagonal incisions, cordons decorated with finger-tip impressions, cordons decorated with straight incisions and knobs on the bag-like vessel. The smaller part of the ceramic fragments consists of medium and good quality, well-smoothed and rough surfaced vessels, decorated with bands filled with cross incisions, diagonal incisions and cross incisions on the rim, bowls decorated with diagonal cannelures, bowls decorated with triangles filled with diagonal incisions, S-profiled bowls and cups, cups with high swinging handles, pots with globular body, lobed bowls. Other decorations to mention include vertical triangle bands filled with crossed incisions, rows of punched impression, geometric shapes and bands filled with crossed incisions, spiral hooks filled with crossed incisions, cordons decorated with finger-tip impressions, diagonal cannelures.

An outstanding pottery fragment was also found in the above-mentioned context: the remains of a portable stove of reddish-brown color, rough, smoothed, tempered with pebble, oxidation firing, decorated with continuous spirals formed by a row of serrated points. The representation of a portable stove is also depicted

on it. Other finds include stick-heads, wagon model wheels, spoon.

From the surroundings of context 398 and 352, rough and medium tempered, large and medium-sized bag-like pots, bowls decorated with bands filled with cross incisions, S-profile pots decorated on the rim with incisions, diagonal cannelures, cordons decorated with finger-tip impressions, undecorated lobed bowl fragments, bands of geometric shapes filled with cross incisions were found.

In context 615, mostly medium and rough bag-like pot fragments, smaller amounts of fine small and medium-sized vessel fragments were found. The main forms of decoration are cordons decorated with finger-tip impressions, rhombuses filled with incisions, stamped decoration, bands of cross incisions.

Context 616 yielded a few rough bag-like pots and storage vessels with finger-impressed, pinched, and vertically incised cordons, reddish grey medium and fine ceramics tempered with pebble and sand, with oxidized firing, geometric shapes filled with cross incisions, diagonal cannelures and stamped triangles. The main types of vessels are the S-profiled bowls, cups and undecorated lobed bowls.

Context 619. Bag-like pots, bowls and cups rough, medium to fine, tempered with pebble, fine pebble and sand, grey, red and brown in color, made by reduction and oxidation firing. Cordons decorated with finger-tip impressions, bands filled with cross incisions, diagonal cannelures, stamped geometric shapes, lobed bowls, stab and drag technique.

CHRONOLOGICAL CLASSIFICATION AND CONCLUSIONS

The Noua culture can be divided into two phases. In the first (formative) phase, it was influenced by the Monteoru, Wietenberg and Komarówa elements, while in the second phase the influence of eastern features increased.¹⁴

Researchers have come to the conclusion that the Noua culture reached the eastern edge

of Transylvania, the western area of the Eastern Carpathians during its first phase, and exerted its influence on the late phase of the Wietenberg culture found here. They have also established that it was formed earlier in the northeastern region than in the Carpathians, and that it was the developed form of the Noua culture that

¹⁴ SAVA 2002, 213

arrived in Transylvania, and existed in parallel with the late Wietenberg and early Hallstatt cultures. N. Boroffka also confirms the synchronization of the Noua culture and the late Wietenberg culture.¹⁵

Due to several characteristics unique to Transylvania, a local group of the Noua culture can be assumed, west of the Eastern Carpathians, which can be described as a variant of the Noua–Sabatinovka cultural group. This means that the formation of local groups may also be related to regional chronological differences. The migration of the Noua culture to Transylvania can be linked to phase Br.D, the late Wietenberg coexisting with the Noua subgroup in Transylvania.¹⁶ F. Gogâltan brought into discussion the relationship between the Wietenberg III/C and Noua elements found simultaneously at several archaeological sites in inner Transylvania¹⁷.

From the perspective of Central European chronology, in P. Reinecke's system, the Noua culture can be placed between Br.C and HaA, or between MDII and SDII in Hänsel's classification.¹⁸

D. Popa and N. Boroffka considered that the first Noua elements from Transylvania and the

Wietenberg III/C elements were contemporaneous. This chronological relationship is confirmed by radiocarbon data from the Sighișoara–Dealul Viilor site, with ¹⁴C dates between 1685 and 1524 BC,¹⁹; 1742–1501 BC (Cx. Nr. 250),²⁰ and 1740–1490 BC (Cx. 312)²¹, or the data from the settlement in Țichindeal where the appearance of the Noua culture was dated to the 16th century BC.²² Based on the stratigraphic analysis from Rotbav, L. Dietrich also came to the conclusion that in southern Transylvania the Wietenberg III/C and the Noua culture were related.²³

In conclusion, it can be said that at Odorheiu Secuiesc–Kadicsfalvi rét/Alsólok the Noua culture site was established during its development phase, the Noua I phase, and coexisted with the site of the late Wietenberg III/C communities. In absolute chronological terms, the funerary site dates probably from the 16th century BC. One characteristic of this coexistence, observed at several contemporaneous sites, is the appearance of the characteristic Noua-type burials near Wietenberg-type settlements, a feature connected to the early cohabitation of the two communities.

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¹⁵ SAVA 2002, 218.

¹⁶ SAVA 2002, 218–219.

¹⁷ GOGÂLTAN 2009, 110–116.

¹⁸ REINECKE 1965; HÄNSEL 1968.

¹⁹ POPA–BOROFFKA 1996, 56.

²⁰ CIUGUDEAN–QUINN 2014, 149.

²¹ HARHOIU ET AL. 2020, 56.

²² POPA–BOROFFKA 1996, 60; GOGÂLTAN 2009, 119.

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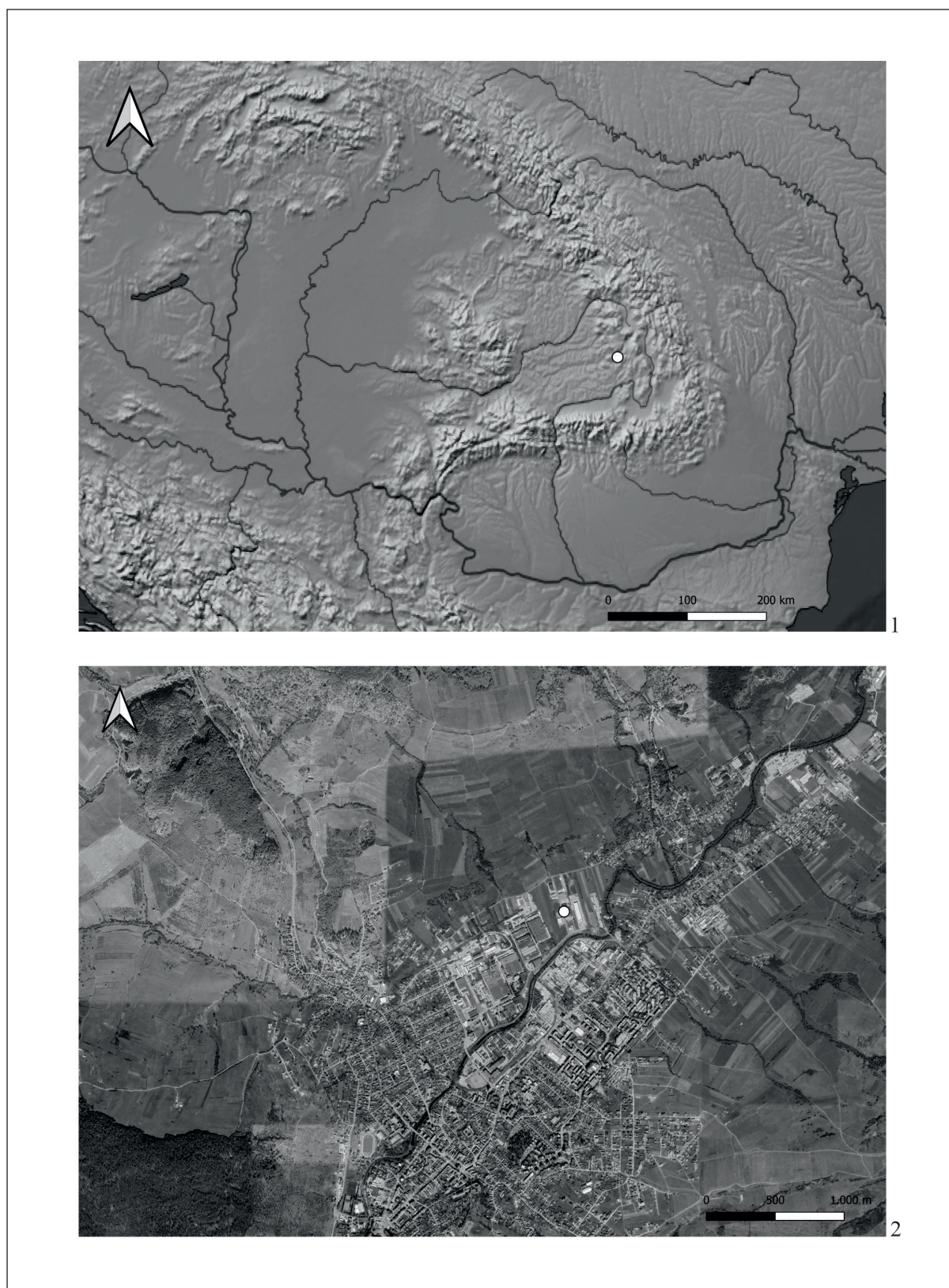


Plate I. Location of the archaeological site Odorheiu–Kadicsfalvi-rét/Alsólok.



Plate II. The location of the Late Bronze Age Noua graves at Odorhei-Kadicsfalvi-rét/Alsólok.

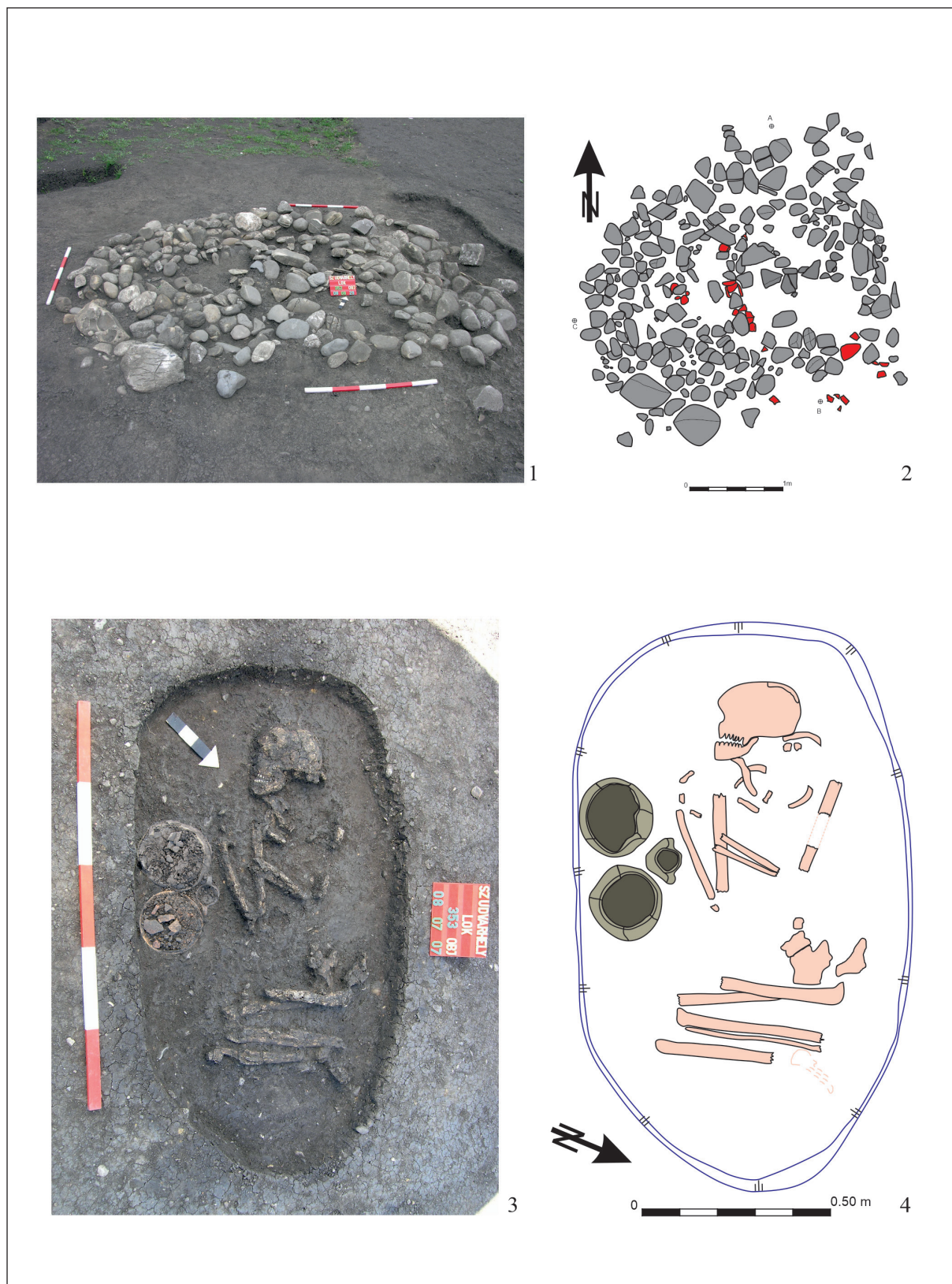


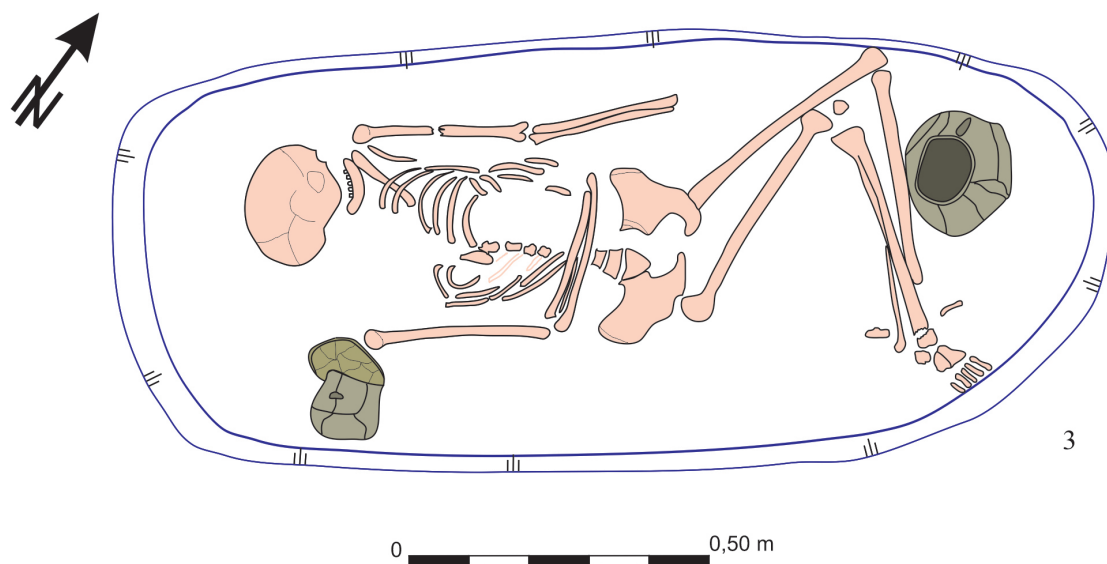
Plate III. Odorhei–Kadicsfalvi-rét/Alsólók. 1–2. Cx.352; 3–4. Cx.353 (photography: Zs. Nyárádi, drawings: I. Asztalos, Zs. Nyárádi, A. Sófalvi).



1



2



3

Plate IV. Odorhei–Kadicsfalvi-rét/Alsólók. 1–3. Cx.397 (photography: Zs. Nyárádi and A. Sófálvi, drawing: A. Sófálvi).

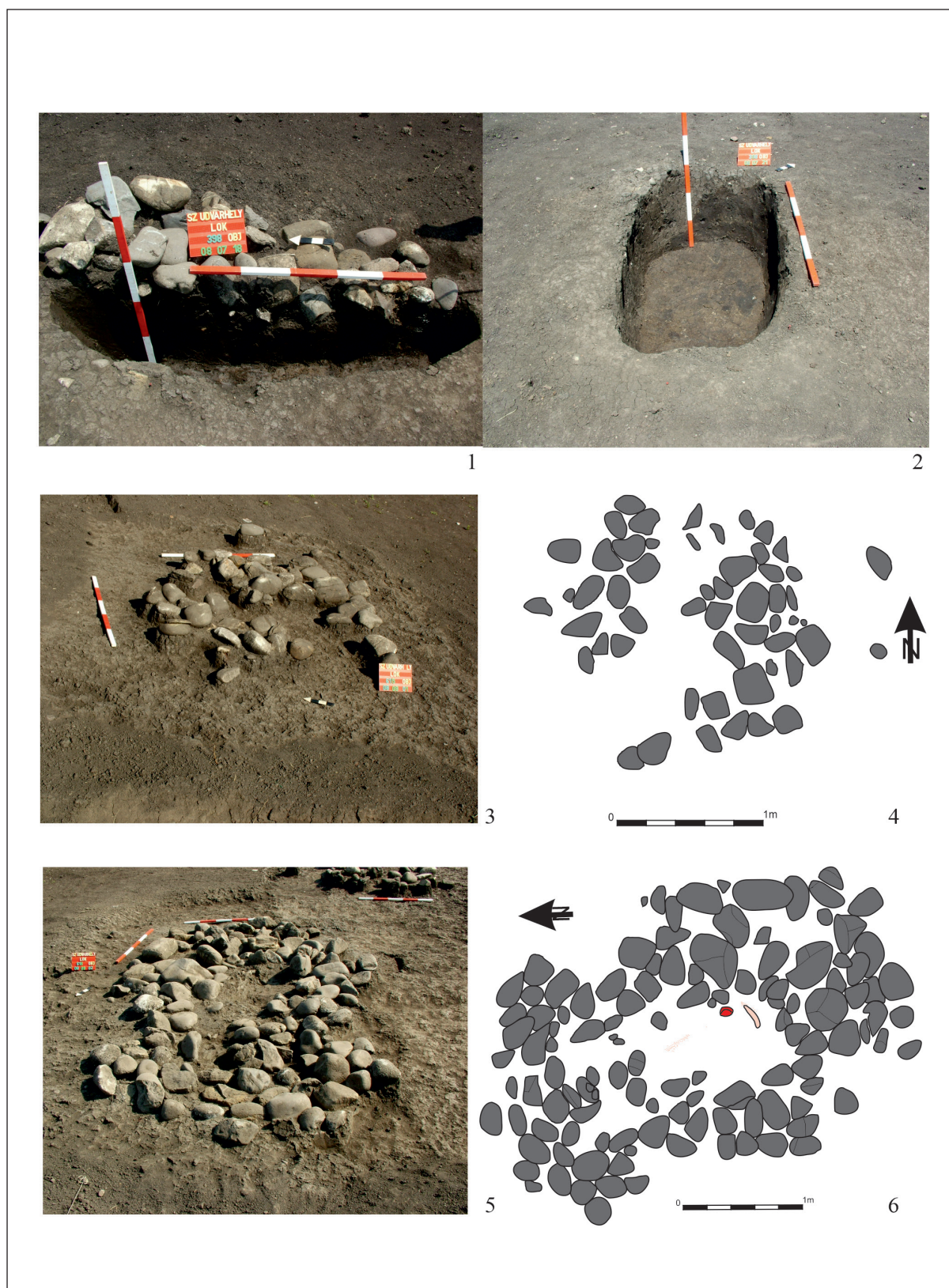


Plate V. Odorhei–Kadicsfalvi-rét/Alsólók. 1–2. Cx.398; 3–4. Cx.615; 5–6. Cx.616 (photography: Zs. Nyárádi and A. Sófalvi, drawings: Z. Botha and Zs. Nyárádi).

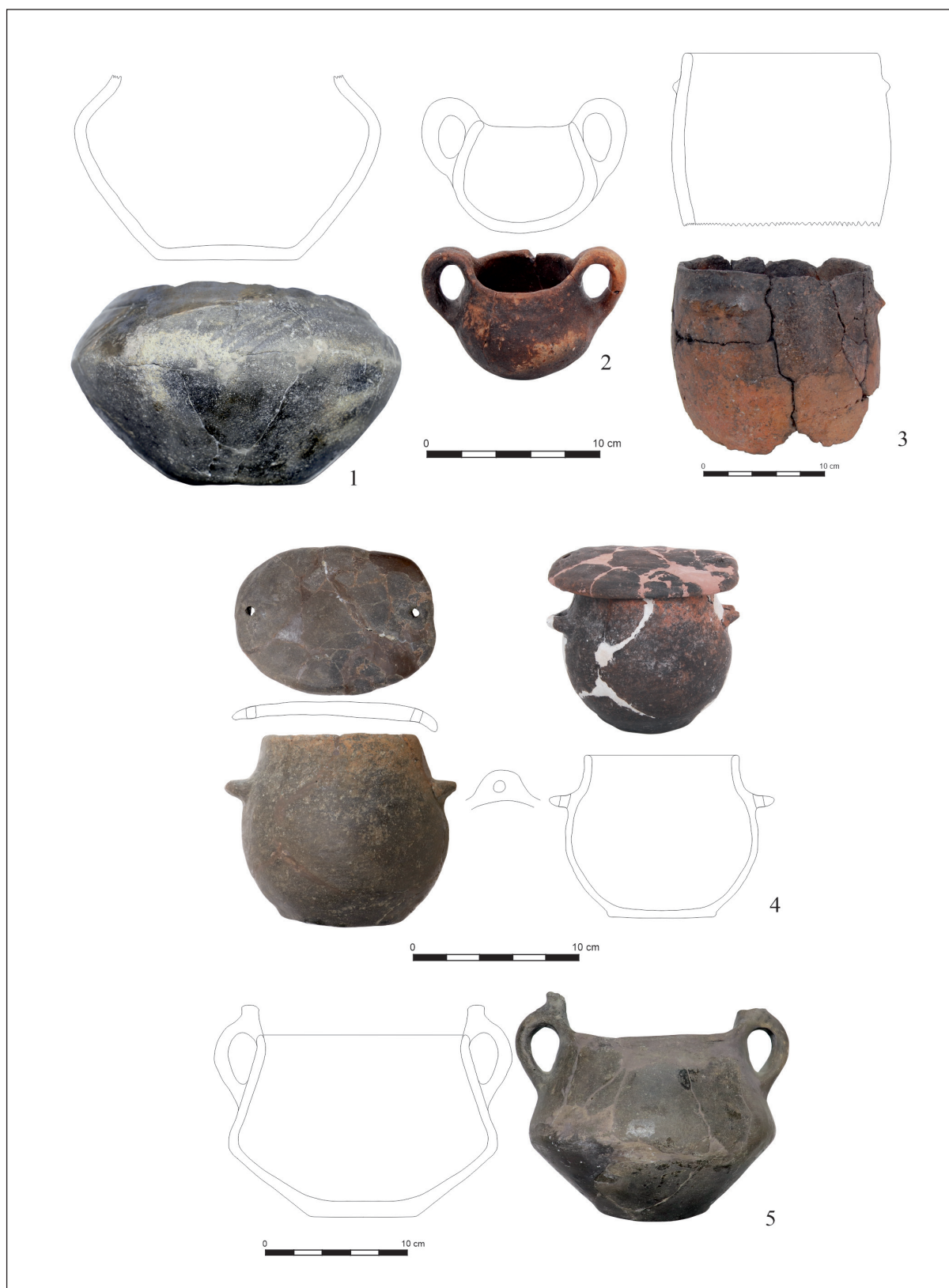


Plate VI. Odorhei–Kadicsfalvi-rét/Alsólok. Pottery from Cx.353 and Cx.397.

ROMAN HAIRPINS FROM CĂLUGĂRENI / MIKHÁZA

ORSOLYA SZILÁGYI* – SZILAMÉR-PÉTER PÁNCZÉL**

This paper discusses a total of 21 bone and bronze hairpins from the Roman military site of Călugăreni / Mikháza. Although evidence confirms the presence of bone-working workshops operating at the site, bone and bronze hairpins are represented in nearly equal proportions. Furthermore, eight hairpins were discovered within the fort, which, along with other pieces of jewelry, suggests the presence of women in this military context.

Keywords: hairpins, small finds, Roman Dacia, eastern *limes*, Călugăreni

Cuvinte-cheie: ace de păr, material special, Dacia Romană, *limes-ul estic*, Călugăreni

The Roman auxiliary fort and vicus at Călugăreni / Mikháza, Mureş / Maros County, (Romania) is located on the left bank of the upper Niraj River and it is one of the major military sites on the eastern *limes* of Roman Dacia. The cohorts *I Augusta Ituraeorum sagittariorum* was stationed in the fort from the second – third quarter of the third century AD.¹ The main components of the site: the auxiliary fort (Area A, Area D), the balneum (area B) and the surrounding military vicus (Area C, Area ERC 2018) have been systematically investigated in 2004 and since 2011 in the framework of research excavations

(Fig. 1) and rescue excavations (ERA, ERC, CAP, CAB projects).

Since then, several papers have been published regarding the research history of the site,² issues related to the protection and presentation of the archaeological heritage,³ preliminary results of the archaeological excavations and surveys,⁴ different artefact categories and archaeometry.⁵

During the recent archaeological excavations at Călugăreni, 21 copper alloy (bronze) and bone hairpins have been discovered (Fig. 2–3; Pl. I–II),⁶ but they have not been seen as being

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¹ Concerning the military unit, see: PISO–MARCUS 2008; ŢENTEA 2012, 52–60; MATEI-POPESCU 2014, 207; SIDÓ–ÖTVÖS 2015; MATEI-POPESCU–ŢENTEA 2016, 10.

² MARCUS 2009, 121–122; PÁNCZÉL 2015; PÁNCZÉL 2018A; PÁNCZÉL 2018C; NYULAS 2021A; NYULAS 2021B.

³ GAUL ET AL. 2014; GAUL–VASÁROS 2015; GAUL–VASÁROS 2016; DÁVID ET AL. 2018A; DÁVID ET AL. 2018B; PÁNCZÉL 2018B; PÁNCZÉL 2018C; SZILÁGYI ET AL. 2020; VASÁROS–SÁGI 2022; SÁGI–PÁNCZÉL 2023; SZILÁGYI ET AL. 2023A; SZILÁGYI ET AL. 2023B.

⁴ MAN ET AL. 2005; POPA ET AL. 2010, 107–110, 124; MAN–CIOATĂ 2012; MAN ET AL. 2012; MAN ET AL. 2013; MAN ET AL. 2014; PÁNCZÉL ET AL. 2014; MAN ET AL. 2015; MAN ET AL. 2016; DOBOS ET AL. 2017; MAN ET AL. 2017; PÁNCZÉL ET AL. 2018; MAN ET AL. 2019; MAN ET AL. 2020; FODOREAN 2020; HÖPKEN ET AL. 2020; OBERHOFER ET AL. 2020; SOÓS 2020, 46–48; PÁNCZÉL–BAJUSZ 2021; PÁNCZÉL ET AL. 2021; DACZÓ–PÁNCZÉL 2022; MAN ET AL. 2022; MAN ET AL. 2023; PÁNCZÉL ET AL. 2023; MAN ET AL. 2024.

⁵ MAN 2006; COCIŞ–MAN 2008; SIDÓ–ÖTVÖS 2015; BITAY ET AL. 2016; BITAY ET AL. 2017; BITAY ET AL. 2018; MUSTAŢĂ–NYULAS 2018; NYULAS 2018; PÁNCZÉL–LUKÁCSI 2019; PÁNCZÉL–SIDÓ 2019; SIDÓ–PÁNCZÉL 2019; BITAY ET AL. 2020; SIDÓ–HÖPKEN 2020; SIDÓ–PÁNCZÉL 2020; SOÓS 2020, 49–57; TALABÉR 2020; SZEKERNYÉS–PÁNCZÉL 2021; FIEDLER ET AL. 2023; DEAC–PÁNCZÉL 2023; SIDÓ 2023; COCIŞ ET AL. 2024.

⁶ We would like to thank our colleagues who participated in the field research and in the restoration process of the finds, but most of all Csongor Lukácsi, Éva Eunika Vajna, Krisztina Csibi for their help with the illustrations and Cloudscale Digital for the 3D models and the digital reconstructions.

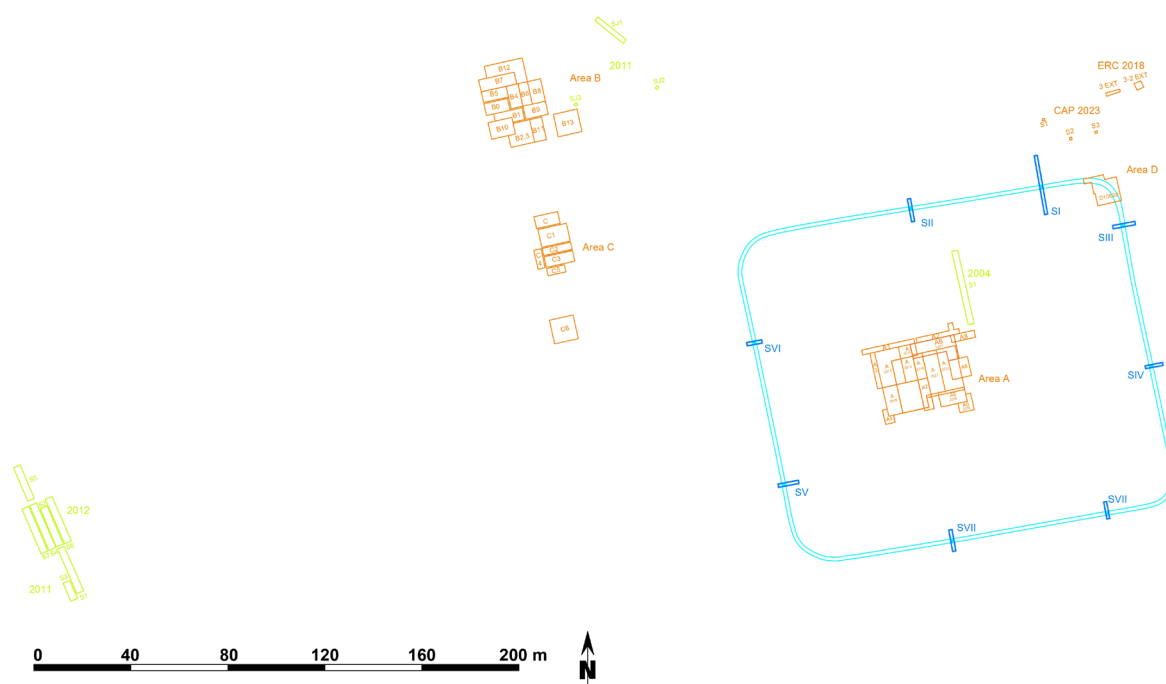


Fig. 1. The research excavations until 2023 (auxiliary fort in turquoise): 1961 excavations in blue; 2004, 2011–2012 excavations in green; 2013–2023 excavations in orange (Made by P. Simon and Sz. P. Pánczél).

of much help in studying either the chronology of the site, or the way in which they fit into the

socio-economic framework of the region,⁷ so they remained mostly unpublished.⁸

THE STATE OF ART CONCERNING ROMAN DACIA

There aren't many studies dedicated solely to hairpins from Roman Dacia, most of these items being discussed together with other categories of small finds from archaeological excavations or museum collections. However, several hairpins have been discovered, both in military and civilian contexts, although from the perspective of quality and quantity, urban regions show a larger variety, due to the presence of the legions, Apulum and Potaissa are the most noteworthy.⁹ Hairpins were made of bone, metal, jet, glass and presumably wood, bone being the most widely used type of material across the Empire.¹⁰ This

phenomenon can easily be explained by the lack of special expertise needed to create bone and, supposedly, wooden hairpins, thus there's a high chance that those with a simpler (i.e. nonfigurative) design were manufactured at home.¹¹ The metal, jet and glass hairpins were almost certainly produced by skilled craftsmen, together with the more elaborate bone ones.¹² The popularity of bone hairpins can also be observed in Dacia, where the majority of these finds are made of bone, thus there's a larger number of papers that focus on these, rather than those made of bronze.

⁷ COOL 1990, 148.

⁸ Two hairpins have been published: TALABÉR 2020, 120–121; 125 Cat. 1–2; 136 Pl. I/1–2.

⁹ TIMOC 2007, 179.

¹⁰ ISAC-GAIU 2006, 423.

¹¹ JOHNS 1996, 162.

¹² JOHNS 1996, 162.

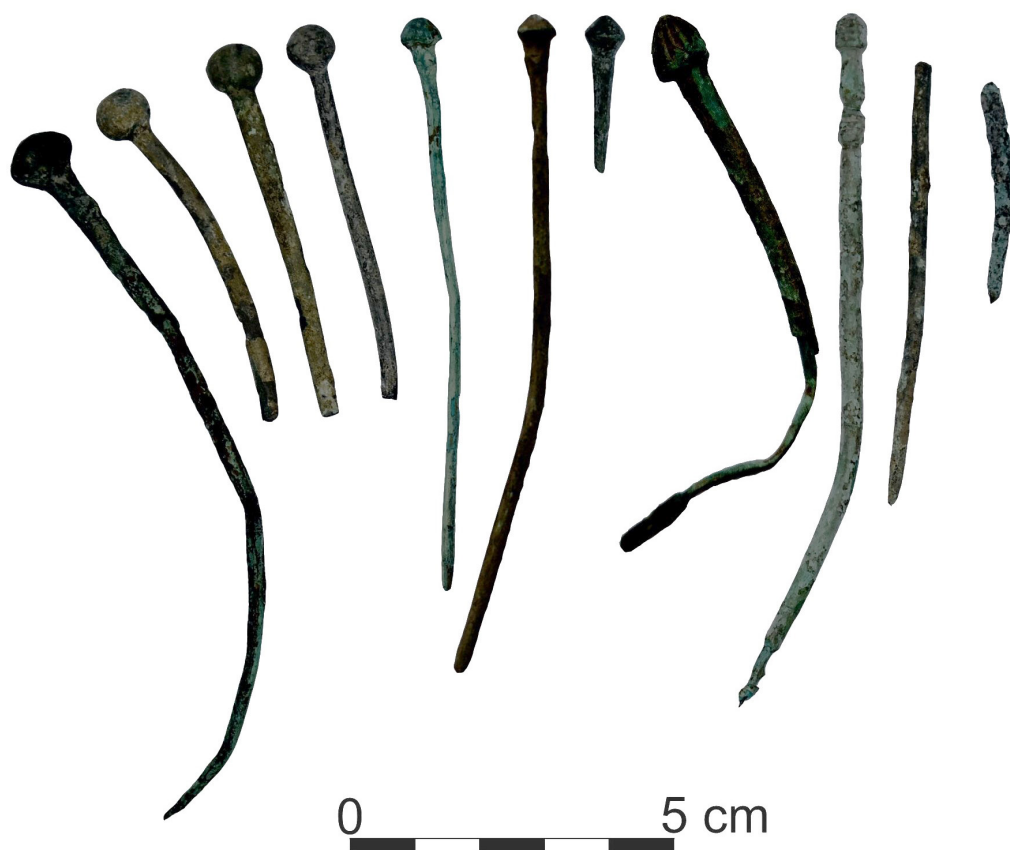


Fig. 2. Group photo of the bronze hairpins.

Bone hairpins are briefly discussed in an article presenting worked bone finds from Ulpia Traiana Sarmizegetusa, the authors concluding that the pins with conical heads were used for a considerable period here.¹³ The first article that pays more attention to hairpins once again presents those found in the above mentioned Roman city, where the authors establish a provisional typology for the bone and bronze hairpins found at Ulpia Traiana Sarmizegetusa.¹⁴

In the small finds monograph of Ulpia Traiana Sarmizegetusa, the bone and the bronze hairpins are presented separately and are grouped after the same principles as the previous typologies, but show greater variety.¹⁵

The typology often referred to for bone

hairpins from Roman Dacia is the one created by N. Gudea and I. Bajusz.¹⁶ In their article, they present ca. 160 bone hairpins from Porolissum, grouping them into five major types. Their research is based on analogies that were found in Britannia, Noricum and Pannonia Inferior.

The bone finds from Dacia Apulensis and Dacia Porolissensis from the collection of the National Museum of Transylvanian History were also discussed in a later paper by S. Cociş and D. Alicu.¹⁷ The 103 hairpins presented were grouped according to the Gudea-Bajusz typology.

In her monograph about worked bone finds from Apulum, D. Ciugudean lists 140 hairpins, which is more than a quarter of all finds listed

¹³ ALICU-NEMEŞ 1982.

¹⁴ ALICU-COCIŞ 1989. The same typology was used in a later article on bronze hairpins from the collection of the National Museum of Transylvanian History (COCIŞ 1994).

¹⁵ ALICU ET AL. 1994, 53, 63–65, 108–109, 116–117, Pl. 39/724–730, Pl. 56/815–831.

¹⁶ GUDEA-BAJUSZ 1991.

¹⁷ COCIŞ-ALICU 1993.

in this publication.¹⁸ The typology she established in her work, consisting of 12 forms, is a combination of the Gudea–Bajusz typology and the one used by J. C. Béal.¹⁹ It is worth mentioning, that none of the hairpins came from the legionary fort, and only one was retrieved from a grave.

The bone and bronze hairpins from the Roman forts of Gilău and Cășeu are briefly discussed in A. Isac's paper on Roman jewellery from the aforementioned forts and are divided into eight types and their various subtypes.²⁰ In the analysis of the material from the military site of Ilișua, the sheer mass of the hairpins is divided into 13 main types,²¹ however it can be said that it also served as a supplement to the

typology for the finds from the amphitheatre of Porolissum.²² From the collections of the Mureș County Museum a total of 10 hairpins were published, coming mainly from Cristești and, to a lesser extent from Brâncovenești, on the eastern *limes* of the province.²³

For the bronze (Fig. 2; Pl. I) and bone (Fig. 3; Pl. II) hairpins from Călugăreni we decided to use the typologies established for the Roman site of Aquincum,²⁴ due to the fact that they are quite complex and integrate most of the typologies established for the western provinces,²⁵ but have a wider range of types than the ones established for Dacia. In the case of some hairpins, it was not possible to identify their exact type due to their fragmentary state.

GENDER RELATED ARTEFACTS IN THE ROMAN AUXILIARY FORT

The presence of women inside the Roman military forts has been the subject of debate for several decades now. Due to a marriage ban enforced onto Roman soldiers since the early imperial period, soldiers were not allowed to have legitimate wives until their official discharge from the army.²⁶ Before the reign of Septimius Severus, only the senatorial and equestrian commanders were exempt,²⁷ and even though we have no contemporary written sources about how these rules applied exactly to the centurions, there is both funerary and archaeological evidence showing that they were married while still on active duty.²⁸ While the wife and children of an undischarged Roman soldier never got the full benefits that such unions would provide

under normal circumstances, they did not receive any formal penalties for doing so.²⁹ W. Scheidel even suggests that the term “non-recognition” should be used instead of “ban” when discussing marriage in the Roman army.³⁰

This non-recognition of spouses led many scholars to believe that women and children were completely excluded from entering and living inside a fort, and that they most probably lived in the civilian settlement next to it.³¹ However, there's countless evidence that suggests the presence of women in a place considered to be exclusively male. One of the most famous examples is a writing tablet from Vindolanda, containing a birthday party invitation addressed to the wife of one of the camp's prefects.³² The

¹⁸ CIUGUDEAN 1997, 51.

¹⁹ BÉAL 1983.

²⁰ ISAC 1999.

²¹ ISAC–GAIU 2006, 421.

²² BAJUSZ–ISAC 2001, 401.

²³ PETICĂ–ZRINYI 2000, 125–126, Cat. 26–35; 133, Pl. IV/1–10.

²⁴ FACSÁDY 2009, 85–89; BÍRÓ ET AL. 2012, 73, 75.

²⁵ RUPRECHTSBERGER 1979; COOL 1990; RIHA 1990; DESCHLER–ERB 1998.

²⁶ SCHEIDEL 2007, 417.

²⁷ Although they couldn't marry someone from the same province they were stationed in (SCHEIDEL 2007, 418).

²⁸ ALLISON 2006, 2–3.

²⁹ SCHEIDEL 2007, 418.

³⁰ SCHEIDEL 2007, 418.

³¹ ALLISON 2006, 2.

³² VASS 2010, 127.



Fig. 3. Group photo of the bone hairpins.

presence of small sized leather shoes found in Roman forts was also linked to the presence not only of women, but children as well.³³ A. Böhme stated that certain types of *fibulae* discovered in the Roman fort from Saalburg were probably used by women,³⁴ even though some scholars rejected this assessment.³⁵

The fact that some “traditionally female” objects were found inside forts, led some scholars to argue that these were used by men as well. Parts of the Romanian scientific community have widely supported the claim that both females and males wore hairpins in the Roman period,³⁶ the sole reason being the presence of these items inside forts, in areas supposedly used exclusively by men.³⁷ Despite these claims,

some research has shown that male hairstyles did not justify the use of hairpins.³⁸

Besides contemporary written and visual sources, items found in graves with sexed bodies could help us most in defining what was used more frequently by women and men. Unfortunately, there’s only a handful of papers published on the discoveries from Roman cemeteries in our region. In addition, the sex and even the age of some of the bodies found have oftentimes been determined by non-experts, on the basis of the size and gracility of the remains.³⁹ Based on the published research, we can assume that items like hairpins, earrings, pendants, bracelets, spindle whorls, distaffs, mirrors and certain types of belts were used by women.⁴⁰ While

³³ ALLISON 2015, 107.

³⁴ BÖHME 1970; BÖHME 1972.

³⁵ ALLISON 2006, 6.

³⁶ ALICU-COCIȘ 1989, 228; GUDEA-BAJUSZ 1991, 89; COCIȘ 1994, 53.

³⁷ GUDEA-BAJUSZ 1991, 89.

³⁸ ALLASON-JONES 1995, 28

³⁹ STEMBERGER 2019, 2

⁴⁰ STEMBERGER 2019, 2–8; COOL 2010, 307; BÖHME 1985, 439.



Fig. 4. The distribution of hairpins based on their material and area of discovery.

weapons, military belts and crossbow type brooches can be associated with men.⁴¹ It has to be noted though, that these grave goods can only serve as statistical markers of sex, because items identified as female could easily end up in a male grave and *vice versa*.⁴²

In the case of Roman Dacia, L. Vass analysed the items associated with women found inside forts. Based on the published research available to him at the time, he concluded that the majority of the finds related to women were discovered in places where soldiers were accommodated inside the fort.⁴³ In the case of the fort at Buciumi, the majority of female items were retrieved from barrack no. 5, which might've served as a workshop.⁴⁴ Of course, this does not negate any other evidence connected to female presence in forts.

A total of 8 out of 21 hairpins were found inside the Roman fort from Călugăreni (Fig. 4),

all of them being discovered in the *principia*, the contexts in which they were found can be related to the latest phase of use (late 2nd – 3rd century AD) and the destruction of the building. It is worth mentioning, that the fragments of a gold earring⁴⁵ and a grape-shaped gold pendant were also found inside the building. According to contemporary sources, the wearing of earrings by men was frowned upon in Roman society, although men living in North Africa, Asia Minor and Persia did wear them.⁴⁶ There are no surviving literary sources that would state whether Roman auxiliary soldiers were allowed to wear this jewellery even after enlisting. It is more likely that the earring and the pendant found inside the *principia* belonged to a woman.⁴⁷ The fact that some of the hairpins were found in the *balneum* or in the *vicus* fits in with the usual distribution pattern known from other sites in the province.

⁴¹ STEMBERGER 2019, 9.

⁴² STEMBERGER 2019, 17.

⁴³ VASS 2010, 134.

⁴⁴ VASS 2010, 137.

⁴⁵ TALABÉR 2020, 125.

⁴⁶ JOHNS 1996, 126–127; ALLASON-JONES 1995, 25.

⁴⁷ ALLASON-JONES 1995, 25.



Fig. 5. Digital 3D models and reconstructions of hairpins from Călugăreni (Made by Cloudscale Digital)

For a Roman military site, it is unusual that almost half of the hairpins were made of bronze. This is even more peculiar, if we emphasise the fact that based on the published archaeological evidence, we have at least two different bone working workshops at the site, one in the fort and the other in the *vicus*.⁴⁸ We shall refrain from launching wide ranging conclusions based on 21 hairpins, but the quality of the material would suggest a preference among the ancient inhabitants of Călugăreni for more noble

materials like bronze, and if they could not afford them, an attempt to colour the bone pins was made with the aim of creating the impression that they were made of metal (Cat. 20). In order to emphasise the shape and aspect of the hairpins in their original state, digital 3D models and reconstructions have been made for a selection of two bone (Cat. 12– 13) and three bronze (Cat. 9; Cat. 4; Cat. 1) hairpins from Călugăreni (Fig. 5).

CATALOGUE⁴⁹

Cat. 1. Bent and corroded bronze hairpin with oval head: FACSÁDY 2009, type VI (Pl. I/1).
L: 106.47 mm, d: 3.61 mm, w: 8.13g.

CAL 2014, Tr. B3, Cx. 3061, *balneum*, Sf. 3160, Inv. no. 14571.
Literature: TALABÉR 2020, 125, Cat. 2, Pl. I/2.

⁴⁸ PÁNCZÉL-LUKÁCSI 2019, 420.

⁴⁹ The following abbreviations have been used: L = length; d = diameter; w = weight; CAL = Călugăreni excavations; Tr. = trench; Cx. = context; Sf. = small find number; Inv. no. = inventory number. The artefacts belong to the Archaeological Collections of the Mureș County Museum.

Cat. 2. Slightly bent and corroded bronze hairpin with spherical head, tip broken: FACSÁDY 2009, type VI (Pl. I/2).

L: 55.6 mm, d: 3.5 mm, w: 4.75g.

CAL 2015, Fieldwalking grid 825/2075, *vicus*, Sf. F1169, Inv. no. 15715.

Cat. 3. Slightly bent and corroded bronze hairpin with spherical head, tip broken, FACSÁDY 2009, type VI (Pl. I/3).

L: 58.27 mm, d: 3.66 mm; w: 4.94g.

CAL 2021, Tr. B11, Spoil, *balneum*, Sf. 3662, Inv. no. 15838.

Cat. 4. Bent and corroded bronze hairpin with spherical head, tip broken: FACSÁDY 2009, type VI (Pl. I/4).

L: 58.42 mm, d: 2.96 mm, w: 4g.

CAL 2014, Tr. A, Cx. 32, *principia*, Sf. 615, Inv. no. 14569.

Cat. 5. Slightly bent and corroded bronze hairpin with spherical head and collar: FACSÁDY 2009, type VI (Pl. I/5).

L: 87.80 mm, d: 2.23 mm, w: 1.95g.

CAL 2021, Tr. A8/2021, Cx. 692, *principia*, Sf. 12360, Inv. no. 15839.

Cat. 6. Slightly bent and corroded bronze hairpin with spherical head and collar: FACSÁDY 2009, type VI (Pl. I/6).

L: 91.50 mm, d: 2.20 mm, w: 1.89g.

CAL 2024, Tr. A/2024, Cx. 975, *principia*, Sf. 13853, Inv. no. 17163.

Cat. 7. Corroded bronze hairpin with square section and oval head, tip broken: FACSÁDY 2009, type VI (Pl. I/7).

L: 23.72 mm, d: 2.57 mm, w: 1.39g.

CAL 2015, Tr. A1, Cx. 117, *principia*, Sf. 10050, Inv. no. 14547.

Cat. 8. Bent and corroded bronze hairpin with round section and conical head with canelures, tip broken: FACSÁDY 2009, type II (Pl. I/8).

L: 57.70 mm, d: 4.25 mm, w: 7.80g.

CAL 2016, Tr. C3, Cx. 2116, *vicus*, Sf. 5733, Inv. no. 17162.

Cat. 9. Bronze hairpin with square head and triple rounded collars, tip broken: FACSÁDY 2009 type VIII(?) (Pl. I/9).

L: 106.68 mm, d: 3.62 mm, w: 2.47g.

CAL 2014, Tr. C2, Cx. 2039, *vicus*, Sf. 4129, Inv. no. 14570.

Literature: TALABÉR 2020, 125, Cat. 1, Pl. I/1.

Cat. 10. Slightly bent and corroded bronze hairpin with broken head (Pl. I/10)

L: 67.42 mm, d: 2.70 mm, w: 2.18g.

CAL 2013, Tr. A, Cx. 30, *principia*, Sf. 396, Inv. no. 15766.

Cat. 11. Bent and corroded bronze hairpin with broken head (Pl. I/11).

L: 33.52 mm, d: 3.20 mm, w: 1.29g.

CAL 2017, Tr. B9, Cx. 3198, *balneum*, Sf. 3657, Inv. no. 15837).

Cat. 12. Bone hairpin with conical head, chisel marks and polished surface: BIRÓ ET AL. 2012 type A.I.2 (Pl. II/12).

L: 94.44 mm, d: 3.58 mm, w: 1.52 g.

CAL 2014, Tr. A, Cx. 60, *principia*, Sf. 883, Inv. no. 15727.

Cat. 13. Bone hairpin, with drop-like head and simple collar, chisel marks and polished surface, tip broken: BIRÓ ET AL. 2012 type B.3 (Pl. II/13).

L: 65.26 mm, d: 3.80 mm, w: 1.04g.

CAL 2019, Tr. A/2019, Cx. 587, *principia*, Sf. 11840, Inv. no. 15728.

Cat. 14. Bone hairpin with conical head, chisel marks and polished surface, tip broken: BIRÓ ET AL. 2012 type A.I.2 (Pl. II/14).

L: 52.33 mm, d: 6.47 mm, w: 2.21g.

CAL 2013, Tr. C, Cx. 2018, *vicus*, Sf. 2695, Inv. no. 15833.

Cat. 15. Bone hairpin, with double collar, chisel marks and polished surface, head and tip broken: BIRÓ ET AL. 2012 type B.3 (Pl. II/15).

L: 81.31 mm, d: 5.95 mm, w: 1.67g.

CAL 2014, Tr. C1, Cx. 2034, *vicus*, Sf. 2914, Inv. no. 14601.

Cat. 16. Bone hairpin with chisel marks and

polished surface, tip broken: BIRÓ ET AL. 2012 type A.II (Pl. II/16).

L: 34.02 mm, d: 6.04 mm, w: 1.45g.

CAL 2014, Tr. B3, Cx. 3061, *balneum*, Sf. 3166, Inv. no. 15830.

Cat. 17. Bone hairpin with chisel marks and polished surface, head broken (Pl. II/17).

L: 47.70 mm, d: 2.4 mm, w: 0.29g.

CAL 2019, Tr. A/2019, Cx. 587, *principia*, Sf. 11940, Inv. no. 15823.

Cat. 18. Bone hairpin with chisel marks and polished surface, head broken (Pl. II/18).

L: 45.09 mm, d: 3.60 mm, w: 0.8g.

CAL 2013, Tr. C, Cx. 2018, *vicus*, Sf. 2684, Inv. no. 15826.

Cat. 19. Bone hairpin with straight head, chisel

marks and polished surface, tip broken: BIRÓ ET AL. 2012 type A.I.1 (Pl. II/19).

L: 43.93 mm, d: 3.92 mm, w: 0.76g.

CAL 2015, Tr. B6, Cx. 3130, *balneum*, Sf. 3599, Inv. no. 15817).

Cat. 20. Bone hairpin with chisel marks and polished surface, grey coloured, head and tip broken (Pl. II/20).

L: 12.27 mm, d: 5.80 mm, w: 0.44g.

CAL 2014, Tr. C1, Cx. 2034, *vicus*, Sf. 4033, Inv. no. 15829.

Cat. 21. Bone hairpin with chisel marks and polished surface, some burned traces, head and tip broken (Pl. II/21).

L: 14.81 mm, d: 4.41 mm, w: 0.26 g.

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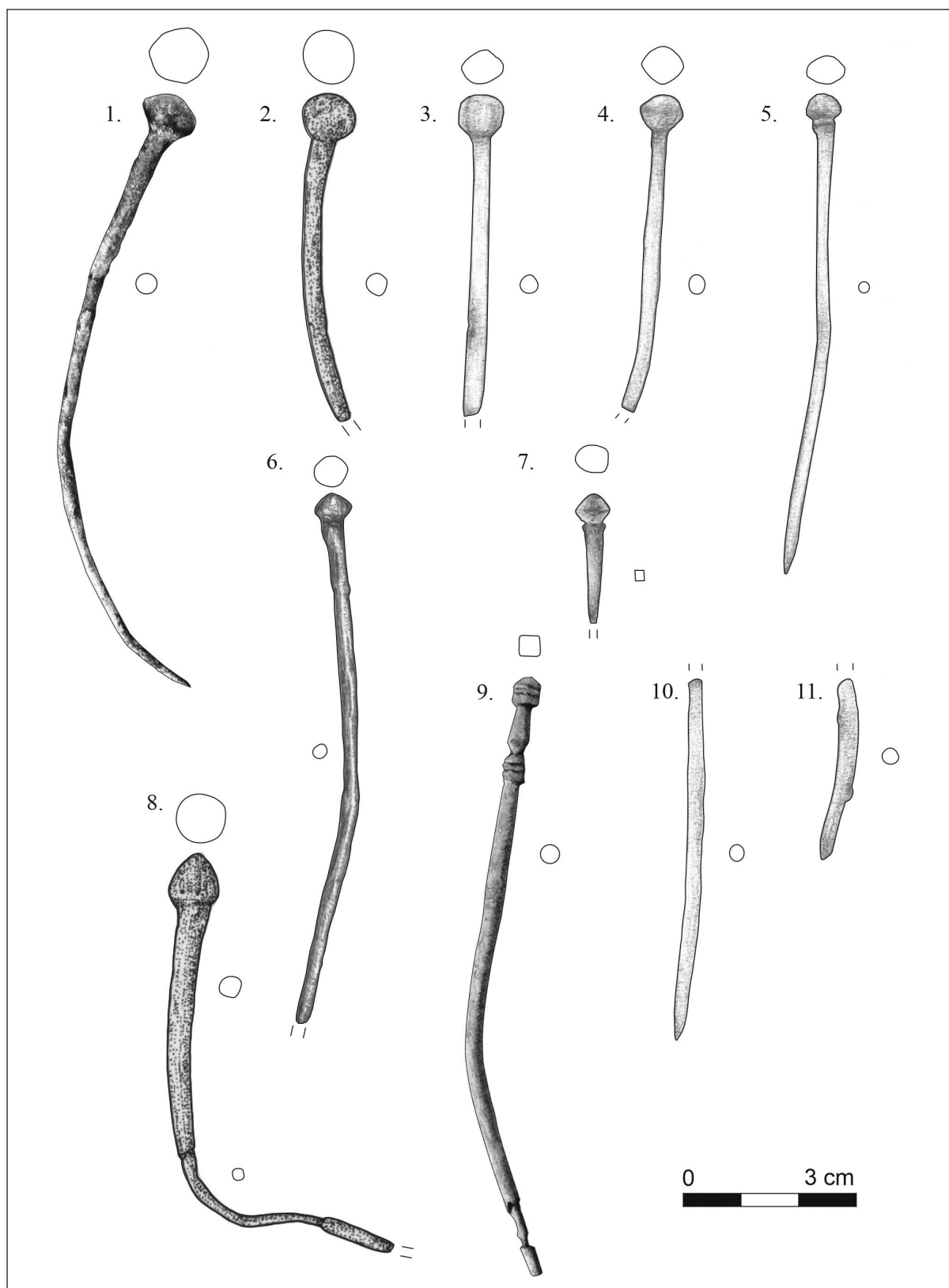


Plate I. The bronze hairpins (Cat. 1-11).

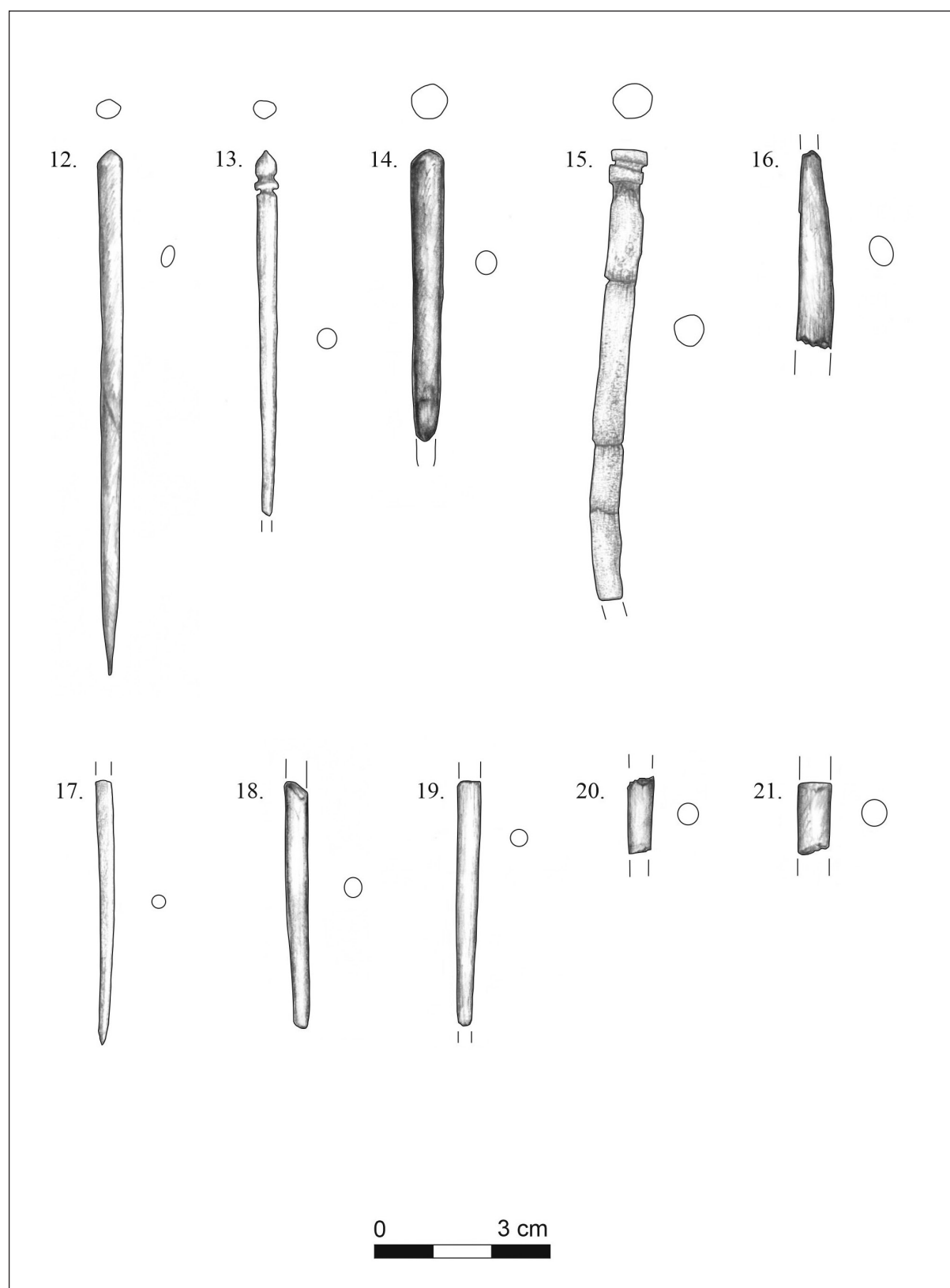


Plate II. The bone hairpins (Cat. 12–21).

THE RESEARCH OF ROMAN STONE GATE TOWERS IN DACIA POROLISSENSIS

PÉTER SIMON*

The current paper presents the researched stone gates from the Roman auxiliary forts of Dacia Porolissensis. The shape of the gate towers and the size of their protrusion have dating significance, which in our case suggest two major rebuilding phases: the construction of the stone precincts and their improvement from a defensive, tactical point of view.

Keywords: Dacia Porolissensis, auxiliary forts, gates, gate towers, dating

Cuvinte-cheie: Dacia Porolissensis, caestre auxiliare, porți, turnuri de porți, datare

1. RESEARCH HISTORY

In the past two centuries the systematic research of Roman auxiliary forts has commenced, with the excavation of several elements of their defensive systems, including the different gates and gate towers. In more fortunate cases, the research results were published in the form of articles or monographs, but we can also name numerous syntheses, which present and analyse them.

Most of these studies were published in the second half of the 20th century and were trying to identify the similarities between the different gates of different Roman auxiliary and legionary forts. Some of the papers also tried to establish a chronological dating system which was mainly based on the form of the gate towers and the extent of their protrusion from the curtain wall.

The first synthesis was published by T. Bechert in 1971, in which the author presents multiple gate types together with their building inscriptions. Based on the results, T. Bechert defined a chronological dating system for these gate towers, covering the time period from Emperor Claudius to Severus Alexander.¹ In the following few decades the discussion of the different types and architectural development of Roman gate towers continued, with numerous authors discussing this topic to a certain extent, such as: I. B. Cătănciu in 1981,² S. Johnson in 1983,³ J. Lander in 1984,⁴ A. Johnson in 1987⁵ and D. A. Welsby in 1990.⁶ Two Romanian researchers have published articles which present and discuss certain aspects of Dacian gate towers: D. Alicu⁷ and D. Isac.⁸

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¹ BECHERT 1971, 201–287.

² CĂTĂNCIU 1981, 4–53.

³ JOHNSON 1983, 9–30.

⁴ LANDER 1984, 5–313.

⁵ JOHNSON 1987, 93–114.

⁶ WELSBY 1990, 113–129.

⁷ ALICU 1973, 107–125.

⁸ ISAC 2006, 131–163.

For the dating of the gates from the forts in Dacia Porolissensis (Pl. I) we can rely on various articles, but also on the monographs which were published for the 17. Limes Congress held in Zalău. Starting at the western part of the *limes* in Dacia Porolissensis, three gates were excavated at the *castrum* of Gilău: the *porta principalis dextra*,⁹ the *porta decumana*¹⁰ and the *porta principalis sinistra*.¹¹ Heading north, at Bologa, the *porta principalis dextra* was partially excavated in 1936,¹² while the other gates were unveiled in the campaign that lasted from 1967 to 1976.¹³ The *porta praetoria* was re-excavated in 2013¹⁴ in order to clarify its ground plan, which unfortunately remained unpublished. Between 1963 and 1976, in a similar type of excavation series, all of the gates of the Buciumi *castrum* were unveiled.¹⁵

At Românași / Largiana the *porta praetoria* was the first to be excavated,¹⁶ the second being the *porta principalis dextra*.¹⁷ Next up, at Romita / Certiae the *porta praetoria* and the *porta principalis sinistra* were unveiled in the two year period of 1996–1997.¹⁸ In 2004¹⁹ and 2013²⁰ geophysical measurements took place at the fort, which allowed to define the approximate size of the remaining gates.

At Porolissum, with the exception of the *porta principalis dextra*, every gate on Pomăt-Hill was excavated in 1943.²¹ Between 1979 and 1989 these gates were unveiled again, together with the previously unresearched gate: the *porta principalis dextra*.²² At Porolissum, systematic archaeological excavations also took place at Citera-Hill in 1958, which presented the two *principales* gates of the fortification, among others.²³

Unfortunately at Tihău we can only speak of a geomagnetic survey,²⁴ based on which some estimations²⁵ were made concerning the size of its gate towers. At Cășeu / Samum we can mention several excavations. In the interwar period E. Panaitescu managed to unearth the *porta praetoria*, *porta decumana* and *porta principalis sinistra*.²⁶ Half a century later D. Isac re-excavated the *porta praetoria*,²⁷ along with the *porta principalis sinistra*²⁸ and unveiled the missing gate: the *porta principalis dextra*.²⁹

At Ilișua / Arcobara all of the gate towers were excavated in the 1980s: the *porta principalis sinistra* in 1982,³⁰ the *porta praetoria* in 1983,³¹ the *porta decumana* in 1984³² and the *porta principalis dextra* in 1987.³³ At Orheiu Bistriței the *porta principalis sinistra* was indeed

⁹ ISAC ET AL. 1981, 85–98.

¹⁰ ISAC 1997, 53.

¹¹ ISAC 1997, 57.

¹² MACREA 1938, 195–233.

¹³ GUDEA 1997, 12–13.

¹⁴ MARCU ET AL. 2014, 28–29.

¹⁵ GUDEA 1997a, 13–15.

¹⁶ TAMBA 1997, 12–13, 23.

¹⁷ TAMBA 1997, 23.

¹⁸ MATEI-BAJUSZ 1997, 18–19.

¹⁹ FRANZEN ET AL. 2007, 161–177.

²⁰ OPREANU-LĂZĂRESCU 2016, 71–74.

²¹ TÓTH 1978, 6–7, 72.

²² GUDEA 1997b, 17.

²³ MACREA ET AL. 1961, 374–376.

²⁴ HAALEBOS 1999.

²⁵ BENNETT 2006, 279–299.

²⁶ PANAITESCU 1929, 321–342.

²⁷ ISAC 2003, 82.

²⁸ ISAC 2003, 90.

²⁹ ISAC 2003, 96.

³⁰ PROTASE ET AL. 1997, 16.

³¹ PROTASE ET AL. 1997, 19.

³² PROTASE ET AL. 1997, 22.

³³ PROTASE ET AL. 1997, 28.

researched to some degree,³⁴ but the results did not yield anything significant.

At Gherla two gates were partially uncovered: the *porta principalis dextra*³⁵ and the eastern tower of the *porta decumana*,³⁶ while

the remaining ones were destroyed due to erosion and modern interventions. The *castrum* of Livezile doesn't have a stone phase, while at Sutoru / Optatiana the gates remain unexcavated.³⁷

2. RESEARCH QUESTION AND METHODOLOGY

In the past two centuries a significant percentage of the gates from the auxiliary camps in Dacia Porolissensis have been excavated. These gates, or rather their towers, hold dating signifi-

gates in a standardised way, therefore the plans of these have been digitally redrawn following a consistent notation system (Fig. 1). Unfortunately, not every gate plan was published. In these cases, I'll be referring to the fortifications' plans, which were also redrawn, although after a slightly different notation system (Fig. 2).

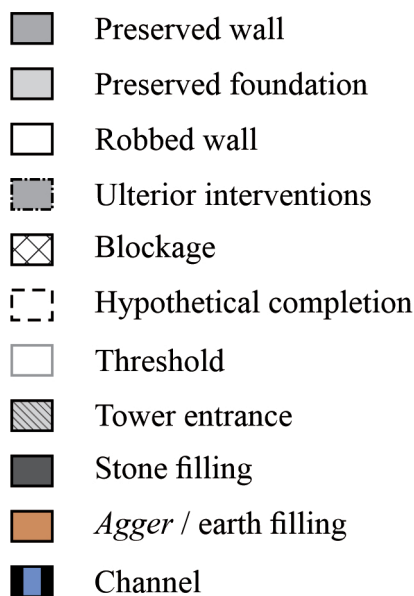


Fig. 1. Legend of the gate plans.

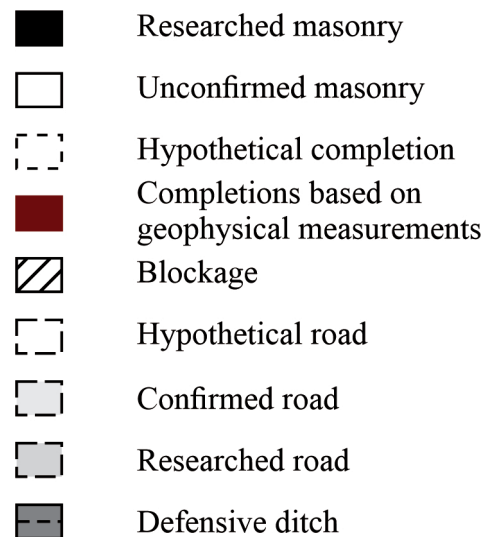


Fig. 2. Legend of the *castrum* plans.

cance, which is mainly due to the shape, size of protrusion and actual extent of the gate towers. It is worth mentioning that the last comprehensive study about gates from Roman Dacia was published in 1973,³⁸ thus the re-evaluation of the topic seems overdue.

Beside the analysis, I find it not only important, but compulsory to present the examined

³⁴ PROTASE 2008, 12, 16.

³⁵ PROTASE ET AL. 2008, 20–21.

³⁶ PROTASE ET AL. 2008, 23.

³⁷ After the completion of this paper, the north-western gate (*porta principalis sinistra*) of the fort was excavated and the results were published in a preliminary report (COCIȘ ET AL. 2024, 374–380).

³⁸ ALICU 1973.

3. ANALYSIS

3.1. The evolution of gate towers from the 1st to the 3rd century CE

Stone gates appeared in Roman architecture as early as the 1st century CE, more precisely during the reign of the Flavian dynasty and were initially used in the defence of cities.³⁹ In military architecture, namely in legionary camps, they were first used during the reign of Vespasian (69–79 CE). More than a decade later, during or shortly after the reign of Domitian (81–96 CE), auxiliary camps also started to incorporate stone gate towers into their precincts.⁴⁰

In terms of shape, the first ones were rectangular, directed towards the interior of the camp and had minimal or no projection at all.⁴¹ This form of construction was still common under Hadrian⁴² (117–138 CE), but during the reign of Antoninus Pius it started to evolve:⁴³ although the shape remained unchanged, the outer walls were built with minor protrusions. The expansion of the Roman Empire was mostly halted at this point, the frontiers became permanent, more and more camps started to construct their stone precincts. These major reconstruction works didn't have tactical reasons, in the long run a stone defensive wall's maintenance was simply more cost effective compared to that of the turf-timber type.⁴⁴

After the numerous crises that devastated the Empire during the Marcomannic Wars and the failure of the fortifications, due mostly to the fact that the gate towers had a structural logic,⁴⁵ a greater emphasis was put on tactical importance. At first, at the end of the reign of Marcus Aurelius (161–180 CE) large rectangular

gate towers were built with greater protrusions. This concept was improved during the Severan dynasty with the implementation of rounded gate towers. These types of towers were not a new technology, but tactically they were far superior to their predecessors, as they proved to be structurally more robust⁴⁶ and they limited the so called dead zones⁴⁷ in front of them.⁴⁸

3.2. Gate tower types from the 1st to the 3rd century CE

In the age of the Principate, the various changes in military architecture can be observed linearly and to some extent even on imperial level. These include the modernisation of the various gate towers, as well as the attempts to improve them. This fact recommends the

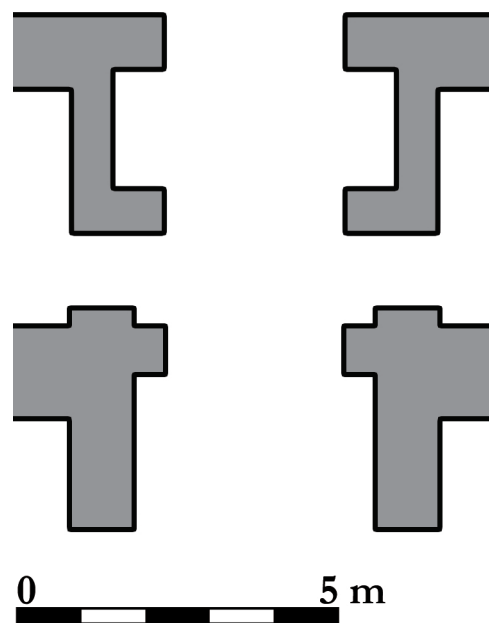


Fig. 3. Gates equipped with a single tower.

³⁹ JOHNSON 1983, 20.

⁴⁰ BECHERT 1971, 236.

⁴¹ JOHNSON 1987, 112.

⁴² JOHNSON 1983, 24.

⁴³ BECHERT 1971, 238.

⁴⁴ LANDER 1984, 56, 299.

⁴⁵ LANDER 1984, 104.

⁴⁶ BECHERT 1971, 260–262.

⁴⁷ In military fortification the dead zones are defined as areas that are unintentionally sheltered from defensive fire. These spots are usually right in front of the precinct wall, the defender cannot shoot or throw projectiles here without putting his own life in danger, i.e. leaning out.

⁴⁸ LANDER 1984, 304.

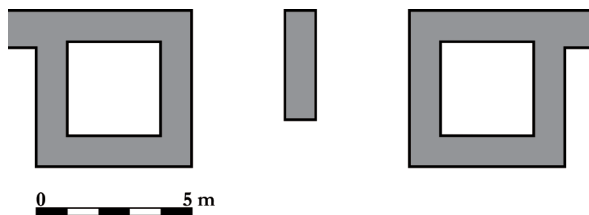


Fig. 4. Nonprotruding rectangular gate towers.

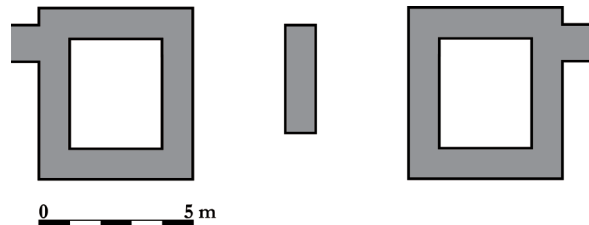


Fig. 5. Slightly protruding rectangular gate towers.

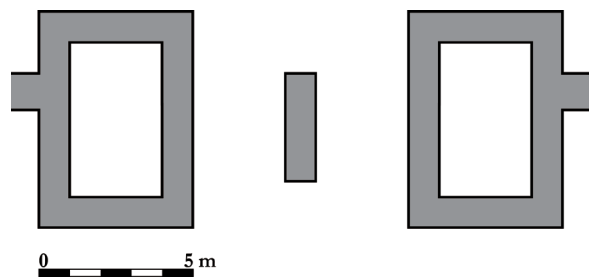


Fig. 6. Heavily protruding rectangular gate towers.

examination of the shape and the protrusion of these gate towers, as they have dating significance.

In the period from the 1st to the 3rd centuries CE we come across two types of gates: the gate equipped with one tower⁴⁹ (Fig. 3) and the one with two towers. At first the towers of the latter were built in rectangular shape, without any kind of protrusion (Fig. 4), over time however, more specifically and especially after the Marcomannic Wars,⁵⁰ the protrusions increased in size (Fig. 5 and Fig. 6). The evolution from the rectangular gate towers took place in two directions, more or less at the same time: at the end of the 2nd and the first quarter of the 3rd centuries. These towers had rounded (Fig. 7) and cut-away (Fig. 8).

From a tactical perspective J. Lander defines a few relevant points a gate tower should aim

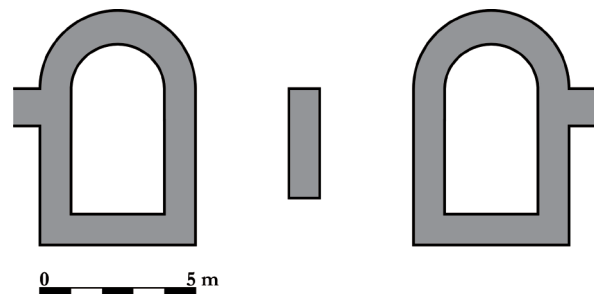


Fig. 7. Rounded gate towers.

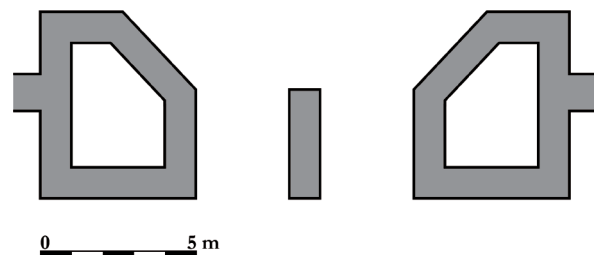


Fig. 8. Cut-away gate towers.

to achieve. Firstly, it should serve as a raised position for better observation and from which weapons or at least tossable objects can be thrown down on the attackers with greater force and even from the distance. Secondly, it should strive to be a position from which it is less difficult to combat attackers who already managed to scale the defensive wall of the fortification and on which considerable manpower and fire-power can be concentrated. Thirdly, it should be an elevated position from which the defenders can combat attackers who have reached the gates or the gate towers and who might fire back, use mines or rams to breach the fortification's defences. Last but not least a tower should provide a stable position for heavy artillery.⁵¹

The first consideration was already present in the timber-turf phase of the fortifications. In the stone phase, a gradual evolution can be observed, which mainly meant that the towers were built with greater protrusion and in larger size. After the crisis of the Marcomannic Wars, much more emphasis was put on the second point, after which, during the Severan dynasty,

⁴⁹ In these types of gates, a single tower was built directly above the gate entrance and the traffic was carried out on the ground floor of the tower.

⁵⁰ LANDER 1984, 104.

⁵¹ LANDER 1984, 302.

the rounded gate towers became the standard.⁵² This type was able to reduce the so called dead zones or rather the third point was incorporated. This last consideration was only explored in the following centuries.⁵³

The currently available archaeological data reveals that two types of gate towers are observable in Dacia Porolissensis: the rectangular and the rounded ones.

3.3. Stone gates in Dacia Porolissensis

Apart from the auxiliary camp of Sutoru / Optatiana, where none of the gates have been excavated, and the *castrum* of Livezile, which was only a temporary turf-timber type fortification, all the other camps of the province have gates or gate towers that have been researched.

Gilău: the towers of the three researched gates are rectangular in shape and were built with protrusions exceeding one metre. Based on the type of gate towers, D. Isac dated their construction and that of the stone precinct to the second half of the 2nd century.⁵⁴

Bologa: archaeological results have revealed that all four gates of the fortification were equipped with rounded towers. Based on their plan, N. Gudea dates their construction to the beginning of the 3rd century CE, more precisely to the joint reign of Septimius Severus and Caracalla.⁵⁵ This presumption is mainly based on their type, which corresponds to the relative chronological development of the gate towers.

The construction of the rounded gate towers represents a rebuilding phase. This is also indicated by the results of the *porta praetoria*'s

reexcavation, in which F. Marcu states that the walls of the towers are not connected to the fortification's defensive wall.⁵⁶ The construction of the camp's stone precinct should be dated earlier, to the 2nd century CE.

Buciumi: N. Gudea is uncertain about the time of construction of the fortification's stone precinct and its *porta praetoria*, but notes that the other gates of the camp (the *porta decumana*, *porta principalis sinistra* and *porta principalis dextra*) have rounded plans. He dates these to the beginning of the 3rd century, or rather to the reign of the Severan dynasty.⁵⁷ The rebuilding from stone of certain internal buildings within the *castrum* was dated to the middle or the second half of the 2nd century.⁵⁸ If we take into consideration the shape and the protrusion of the *porta praetoria*, it can be assumed that a larger scale reconstruction was taking place at that time, during which the stone precinct and the stone phase *porta praetoria*⁵⁹ were erected.

Românași / Largiana: Based on the shape and protrusion of the *porta praetoria*, D. Tamba dates the construction of the stone precinct to the last years of Hadrian's rule or to the reign of Antoninus Pius.⁶⁰ This presumption seems inappropriate or unlikely at the least, the towers' considerable size and protrusions⁶¹ indicate the middle or second part of the 2nd century CE.

Romita / Certiae: the towers of the *porta praetoria* have prodigious size, are rectangular in shape and were built with protrusions that exceed 2 metres. Due to the strategically important location of the camp, and with reference to some archaeological finds,⁶² the stone

⁵² LANDER 1984, 303.

⁵³ LANDER 1984, 303.

⁵⁴ ISAC 1997, 50.

⁵⁵ GUDEA 1997, 40.

⁵⁶ MARCU ET AL. 2014, 28–29.

⁵⁷ GUDEA 1997a, 54.

⁵⁸ GUDEA 1997a, 53.

⁵⁹ Although the researchers don't mention any kind of earlier stone phase of the *portae principales* and the *porta decumana*, I find it highly unlikely that these were not rebuilt during this extensive reconstruction period. Most certainly these gates had at least two stone phases, unfortunately only their latest one is identifiable.

⁶⁰ TAMBA 1997, 26–27.

⁶¹ During Hadrian and Antoninus Pius the protrusions were either non-existent or minor. The gate towers researched at the *castrum* of Românași had sizeable protrusions of 1.85 metres, which suggests a later period of construction.

⁶² Here I'm referring to coins of Emperor Hadrian. These have *terminus post quem* significance, their accurate dating aspects are debatable.

construction of the camp is dated to the first half of the 2nd century.⁶³ The fortification's reconstruction in stone may have happened in said period, but, considering its characteristics, I think the *porta praetoria* was built the earliest in the middle, the latest in the last two decades of the 2nd century. The latter seems more feasible, as considerably large rectangular gate towers like these were created as a result of the Marcomannic Wars.

Also, if we accept the assumptions based on the geophysical measurements (Fig. 40) that the *portae principales* of the camp are rounded in shape, then it can be presumed that they were rebuilt within the series of repairs at the beginning of the 3rd century. Repairs proven by archaeological excavations were also simultaneously carried out on the *porta praetoria*.⁶⁴

Porolissum-Pomăt: the gate towers of the fortification are rounded and roughly the same in dimensions and size of protrusions, meaning they were most certainly built at the same time. Concerning the dating of the gates we are highly fortunate, as multiple building inscriptions⁶⁵ have been found on the gates, which date their construction to the exact year of 213 CE. N. Gudea assumes incorrectly that the construction of the rounded gate towers happened simultaneously with the erection of the fortification's stone precinct. In reality and unsurprisingly, not just because the auxiliary fort is arguably the most important in the province, the stone precinct's construction began much earlier, in 129 CE, and was completed under Antoninus Pius.⁶⁶ The first stone gate towers of the *castrum* must have had a rectangular shape, but during the reign of Caracalla they were transformed into rounded ones.

Porolissum-Citera: the towers of the *portae principales* are rectangular and have protrusions slightly exceeding one metre. Based on this data, the towers could be dated to the middle or second half of the 2nd century CE. This dating is supported by a coin of Marcus Aurelius Caesar, which was found in the mortar of the north-western tower of the *porta principalis dextra*.⁶⁷

Tihău: the results of the geophysical measurements carried out at the end of the 20th century made it possible to create the plan of the *castrum*. Unfortunately, the shape and the protrusion, if there was any, of the gate towers are unclear and cannot be identified. Nevertheless, J. K. Haalebos and J. Bennett claim that the towers of the *porta decumana* were rounded and built with protrusions.⁶⁸

Cășeu / Samum: the gate towers of the fortification are the largest of the province's auxiliary camps. Their shapes are rounded and each protrusion exceeds four metres. Based on the results of the archaeological excavations, D. Isac dates them to the beginning of the 3rd century CE.⁶⁹

Ilișua / Arcobara: the researchers date the strongly projecting and square-shaped gate towers to the reign of Marcus Aurelius, which is also supported by archaeological finds.⁷⁰

Gherla: the researched gate towers are rectangular in shape and have a projection of less than one metre. The previous dating of the fortification's reconstruction in stone, together with its stone precinct, was based on an inscription dating from 143 CE, found during the excavations led by J. Ornstein at the beginning of the 20th century. In the recently published monograph, the researchers define a wider period of time for the construction of the stone precinct,

⁶³ MATEI-BAJUSZ 1997, 57.

⁶⁴ MATEI-BAJUSZ 1997, 42–57.

⁶⁵ GUDEA 1989, 761.

⁶⁶ Tóth E. presents two fragmentary inscriptions from the excavation of Radnóti A.: the first was found in the *porta principalis sinistra*, which dates the construction of the gate (or the stone precinct) to 129 CE, while the second is from the *porta praetoria*, dating it to 140/144 CE. Based on these discoveries, Tóth E. states that the stone construction of the fortification's walls began in 129 CE and was completed during the reign of Antoninus Pius. TÓTH 1978, 9, 17–19; OPREANU-LĂZĂRESCU 2016, 61–62.

⁶⁷ MACREA ET AL. 1961, 375–376.

⁶⁸ HAALBOS 1999, 204–205; BENNETT 2006, 289.

⁶⁹ ISAC 2003, 85.

⁷⁰ PROTASE ET AL. 1997, 46.

namely the last years of Hadrian's rule or the beginning of the reign of emperor Antoninus Pius.⁷¹ The gate towers' characteristics

correspond to the latter dating, the camp was certainly built in stone in the first half of the 2nd century CE.

4. CONCLUSIONS

The reconstruction of the Roman fortifications in stone was not without good reason. Unlike a medieval castle, the main purpose of a *castrum* was not to defend itself against sieges. Generally speaking, a Roman military unit was trained to fight its battles in open air, whilst the fortification was considered a logistical and administrative headquarters, a kind of base camp that provides safe accommodation and stable living conditions for its soldiers.⁷²

Still, a few decades after the conquest of Emperor Trajan, almost every single one of the auxiliary camps' defensive elements were enhanced in Dacia Porolissensis. The Empire sought not only to maintain, but to consolidate its presence in the newly conquered provinces. This brought certain developments, one of which was the construction of stone precincts for the fortifications that protected and supervised the frontier. The main idea behind these extensive reconstructions was basically financial: although a stone fortification's expenses are considerable at first, in the long run the maintenance costs are significantly lower than those of a turf-timber type defensive system, which deteriorates faster. It's also worth mentioning that these stone walls had the symbolic meaning of definitising the frontier and inspiring awe with their high defensive towers. These precincts were generally built with protruding rectangular gate towers (Pl. XVI).

The rounded gate towers (Pl. XVI–XVII)

offer a slightly different interpretation, mainly because they are structurally sturdier and limit the so called dead zones more effectively. The defensive system of the Empire started to get heavily tested in the second part of the 2nd century CE, due to the numerous crises, namely the Marcomannic Wars and different plagues. Needless to say, these factors had a negative impact on the population and thus on the military as well. Change, in the sense of evolution, was unavoidable: in the light of fewer soldiers, the forts' defensive systems were upgraded, among others, rounded gate towers replaced the rectangular ones. Evidently these changes were made in camps where it made more sense, in other words which were more susceptible to attacks, like the northwestern frontier of Dacia Porolissensis. The rounded gate towers were the norm during the Severan dynasty, and are dated to the first quarter of the 3rd century CE.

Based mostly on the shape and the protrusion size of these gate towers, two major reconstruction phases can be identified in the province. The first, with the use of rectangular gate towers, marks the period of around the middle of the 2nd century CE, representing the construction of the fortifications' stone precincts. The second one happened in the first quarter of the 3rd century CE with the building of rounded towers, indicating a series of tactical improvements in the defensive elements of the military camps.

5. CATALOGUE

5.1. Gilău

5.1.1 Gilău, *porta principalis sinistra*

The single-portalled *porta principalis sinistra*

(Fig. 9) is located on the northern side of the fortification (Pl. II). Due to the preserved state of the ruins, the exact width of its entrance

⁷¹ PROTASE ET AL. 2008, 41.

⁷² GOLDSWORTHY 1996, 25–26.

cannot be precisely defined, D. Isac estimates it to 3.5 metres.

The gate towers were built in rectangular shape and have protrusions of 1.3 metres. The left tower's dimensions are 5.25×7.5 m, while the right tower measures 6×7.75 m. The walls were built from quarried stone in the *opus incertum* technique, with a general width of 1.1–1.2 metres.

Presumably the gate wasn't used for passage, which is implied by the absence of a road and the fact that it was built on the top of a relatively steep slope. For structural reinforcement the eastern wall of the right gate tower was widened to 2.5 metres.⁷³ The stone phase was dated to the second part of the 2nd century CE.⁷⁴

5.1.2. Gilău, *porta principalis dextra*

The *porta principalis dextra* is located on the southern side of the military fortification (Pl. II). The overall width of the gate entrance measured 8.6 metres. The gateway is double-portalled, a central wall⁷⁵ divides the entrance into two equal entry points.

The rectangular towers protrude slightly outwards from the defensive wall by 1.1–1.3 m. The left tower has a surface area of 5×7.6 m, while the right one measures 4.75×7.1 m. The walls of these towers have a width of 1.15–1.5 m and were built from quarried stone in *opus incertum* technique.

Two main construction phases were identified in the interval of use at these towers. In the first, the walls facing the gate opening were equipped with a total of five buttresses: one external pair, one middle pair, and an additional buttress on the inner side of the left gate tower (Fig. 10). In the second phase, the towers were rebuilt, meaning that the foundation of the walls facing the gate entrance were thickened, including the buttresses (Fig. 11). Upon this foundation the newly built walls were erected (Fig. 12).

Its first phase can be dated to the middle of the 2nd century CE, while its second phase to the first quarter of the 3rd century or rather the Severan Dynasty.⁷⁶

5.1.3. Gilău, *porta decumana*

The *porta decumana* (Fig. 13) is located on the western side of the *castrum* (Pl. II). The gate is single-portalled and according to its plan, the width of the entrance measures 4.5 metres.

The gate towers are rectangular and have protrusions of 1.1–1.3 metres. The surface area of the left tower is 4.7×7.6 m, while that of the right tower is 4.5×8 m. The walls have a width of 1.2 metres and were built from quarried stone in *opus incertum* technique. The walls facing the gate opening were equipped with one pair of buttresses, with a distance of 3.7 metres between them. Later repairs can be observed on the right tower, on the wall facing the interior of the camp.⁷⁷

The reconstruction of the gate from stone happened in the second part of the 2nd century CE.⁷⁸ Its structural repairs were presumably carried out in the middle of the 3rd century, just like the reconstruction of the *porta principalis dextra*.

⁷³ Isac 1997, 57.

⁷⁴ Isac 1997, 50.

⁷⁵ Although D. Isac does not mention its size, it can be determined from the plan of the gate, on which it is 1.2 m wide and 5.6 m long.

⁷⁶ Isac 1997, 54–56.

⁷⁷ Isac 1997, 53–54.

⁷⁸ Isac 1997, 50.

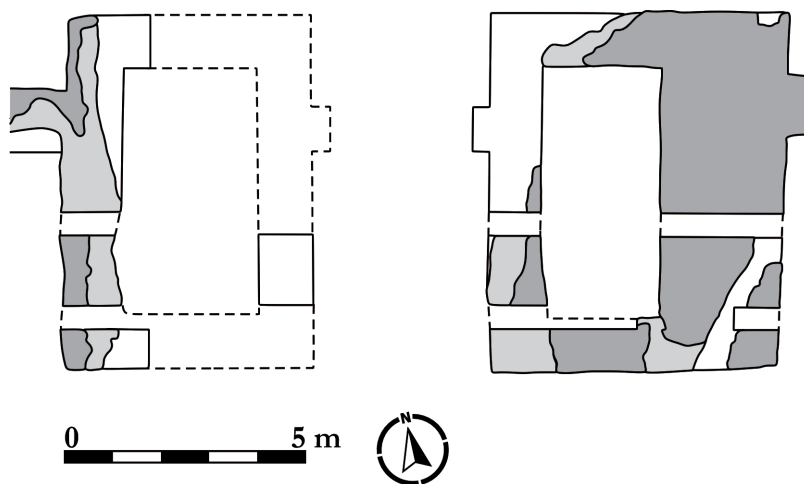


Fig. 9. Gilău, *porta principalis sinistra* (after IsAC 1997, 99, pl. XVIII).

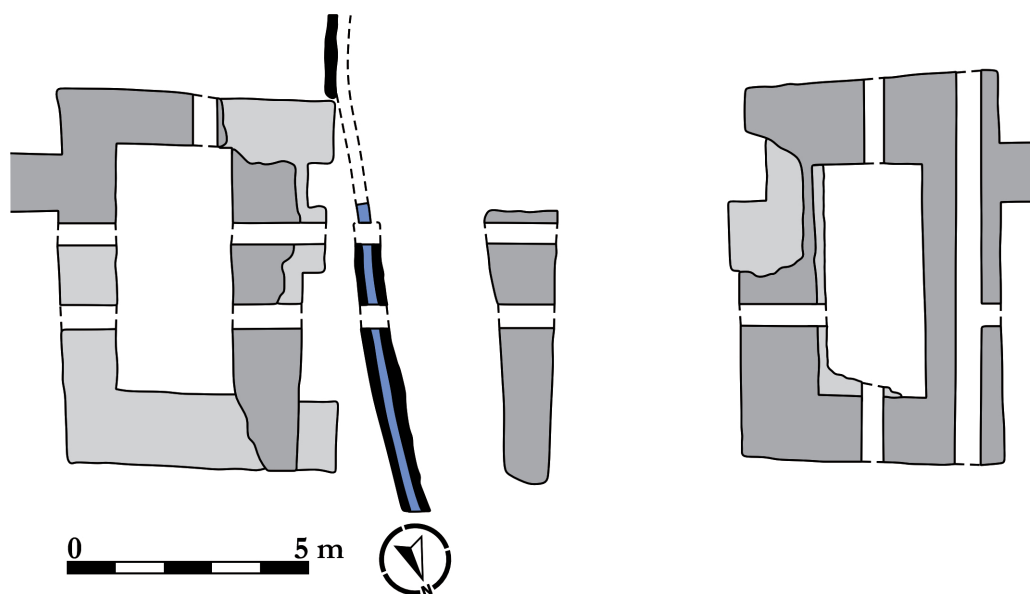


Fig. 10. Gilău, *porta principalis dextra* 1st phase (after IsAC 1997, 96, pl. XV).

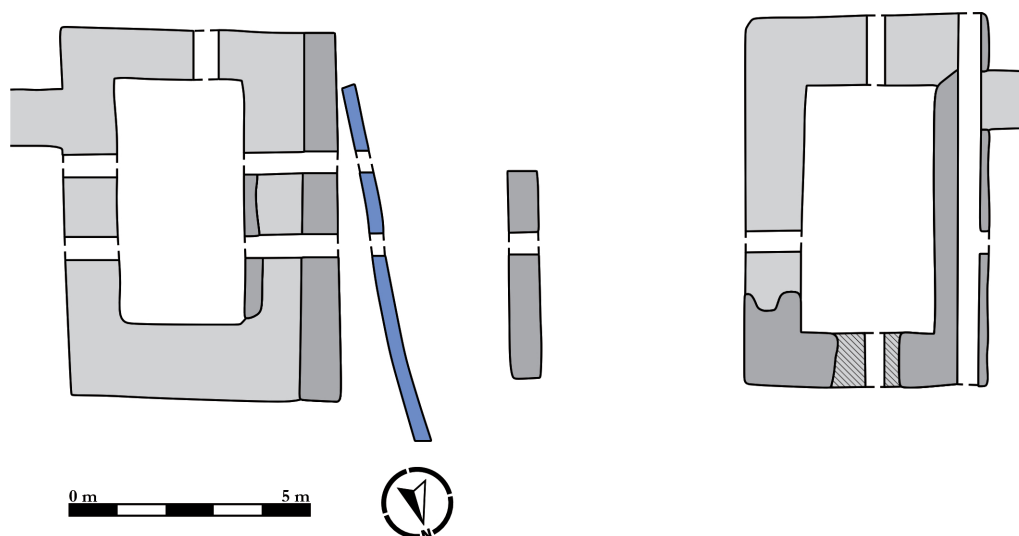


Fig. 11. Gilău, *porta principalis dextra* 2nd phase foundation (after IsAC 1997, 97, pl. XVI).

5.2. Bologa

5.2.1. Bologa, *porta praetoria*

The *porta praetoria* (Pl. III) is located on the northern side of the *castrum* (Fig. 36). The gate is single-portalled with an opening of 7.3 metres.

The towers are rounded and were built with protrusions of 1.9–2 metres. The left tower's surface area is 4.85×8.25 m, while the right one measures 4.35×7.25 m. Its walls were built of quarried stone and river cobbles using the *opus incertum* technique and are 1–1.15 metres wide. The roofing of the towers is indicated by *tegulae* and *imbrex* fragments.⁷⁹

The walls of the towers without a ground floor enclose the *agger*. Their semicircular projections were filled with stone, up to the first floor. The walls of the towers facing the gateway had two pairs of buttresses, that supposedly supported a bridge connecting the towers.⁸⁰

According to F. Marcu, the doorway was blocked along the line of the outer pair of buttresses. He also believes that the towers were not built at the same time as the stone precinct,⁸¹ which also indicates their later construction. The gate is dated to the beginning of the 3rd century.⁸² The purpose of the reexcavation was to clarify the arguably incorrect floor plan. Unfortunately, the updated version hasn't been published yet, the current ground plan should be viewed with adequate criticism.

5.2.2. Bologa, *porta principalis sinistra*

The *porta principalis sinistra* (Fig. 15) is located on the western side of the fortification (Pl. III). The overall width of the gate entrance measured 7.5 metres. The gateway is double-portalled, a central wall (0.75×4.5 m) divides the entrance into two equal entry points.

The towers are rounded in shape and protrude 1.8–2 metres from the stone precinct.

The left tower's dimensions are 4.65×7.15 m, while the right tower measures 4.8×7.5 m. Its walls were built of quarried stone using the *opus incertum* technique and are 1.2–1.5 metres wide. The roofing is indicated by *tegulae* and *imbrex* fragments.

The walls of the towers enclose the ends of the *agger*, their entrance was most certainly on the first floor, from the defensive wall. Their semicircular projections were filled with stone, up to the first floor. The walls of the towers facing the gateway had two pairs of buttresses, that probably supported a bridge connecting the towers. Only the *portae principales* were used for passage.⁸³ The gate is dated to the beginning of the 3rd century.⁸⁴

5.2.3. Bologa, *porta principalis dextra*

The *porta principalis dextra* (Fig. 16) is located in the eastern part of the fortification (Pl. III). The width of the gate entrance is 7.5 metres. The gateway is double-portalled, a central wall (1.3×5.1 m) divides the entrance into two entry points.

The towers are rounded in shape and protrude 1.8–2 metres from the stone precinct. The left tower's dimensions are 4.5×7.9 m, while the right tower measures 4.45×7.85 m. Its walls were built of quarried stone, using the *opus incertum* technique and are 1.2–1.5 metres wide. The roofing is indicated by *tegulae* and *imbrex* fragments.

Like the *porta decumana*, the ground floor was inhabited and the entrances were made at the level of the wall. The walls of the towers facing the gateway had two pairs of buttresses that probably supported a bridge connecting the towers. Only the *portae principales* were used for passage.⁸⁵ The gate is dated to the beginning of the 3rd century.⁸⁶ The currently available

⁷⁹ MARCU ET AL. 2014, 28–29.

⁸⁰ GUDEA 1997, 31–34.

⁸¹ MARCU ET AL. 2014, 28–29.

⁸² GUDEA 1997, 40.

⁸³ GUDEA 1997, 31–34.

⁸⁴ GUDEA 1997, 40.

⁸⁵ GUDEA 1997, 31–34.

⁸⁶ GUDEA 1997, 40.

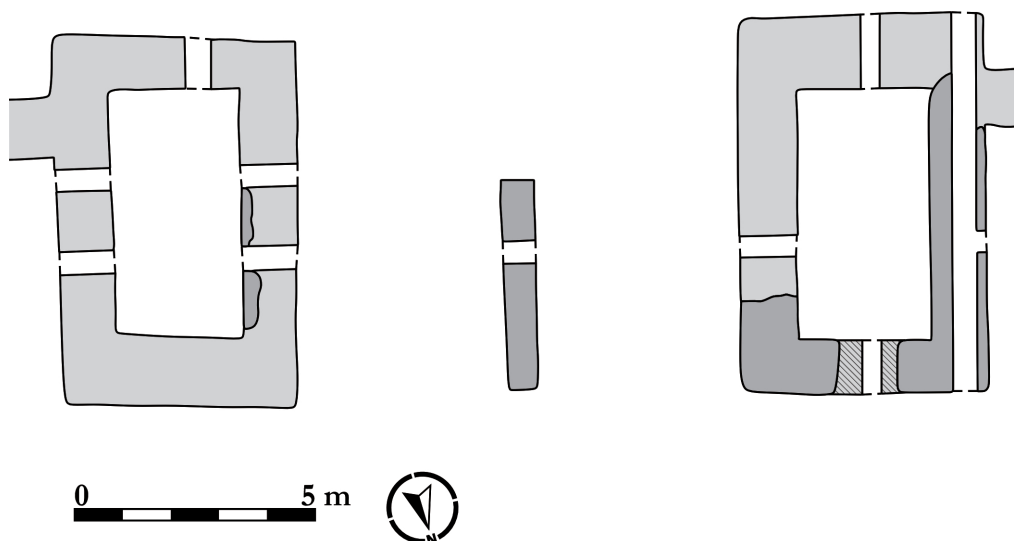


Fig. 12. Gilău, *porta principalis dextra* 2nd phase walls (after IsAC 1997, 98, pl. XVII).

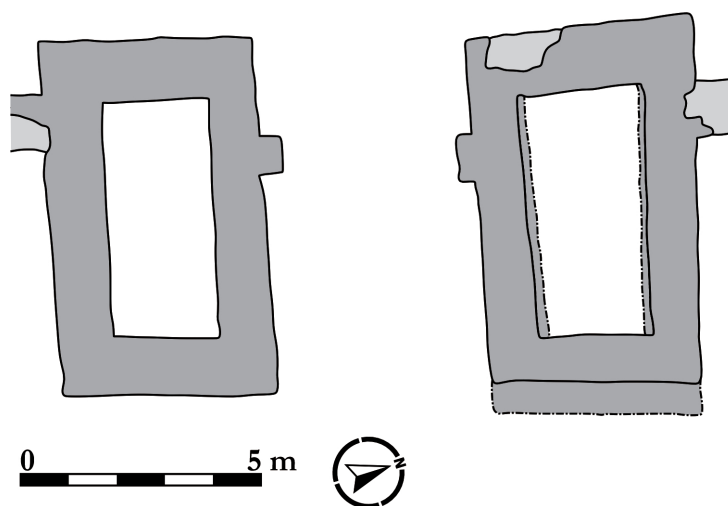


Fig. 13. Gilău, *porta decumana* (after IsAC 1997, 95, pl. XIV).

ground plan is arguably incorrect, it should be viewed with adequate criticism.

5.2.4. Bologa, *porta decumana*

The *porta decumana* (Fig. 17) is located in the southern part of the fortification (Pl. III). The gate is single-portalled, with a width of 7.6 metres.

The towers are rounded and were built with protrusions of 2.15 metres. The left tower's surface area is 4.45×7.15 m, while the right tower measures 4.5×7.5 m. Its walls were built out of quarried stone using the *opus incertum*

technique, and are generally 1.5–1.6 metres wide. The roofing of the towers is indicated by *tegulae* and *imbrex* fragments.

The ground floor of the towers was inhabited, but the entrances were most certainly at the level of the wall, on the first floor. Two pairs of buttresses were identified in the gate opening, which served as a support for the connecting bridge above the passage. The gate passage was blocked in a later period of use of the fortification.⁸⁷ The construction of the gate is dated to the beginning of the 3rd century.⁸⁸

⁸⁷ GUDEA 1972, 127–128; GUDEA 1997, 31–34.

⁸⁸ GUDEA 1997, 40.

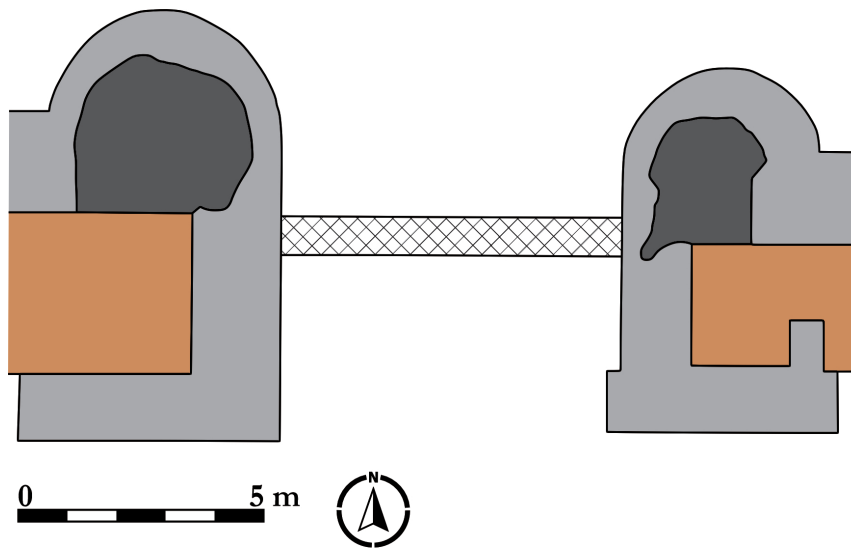


Fig. 14. Bologa, *porta praetoria* (after CHIRILĂ-GUDEA 1973, 120, fig. 4).

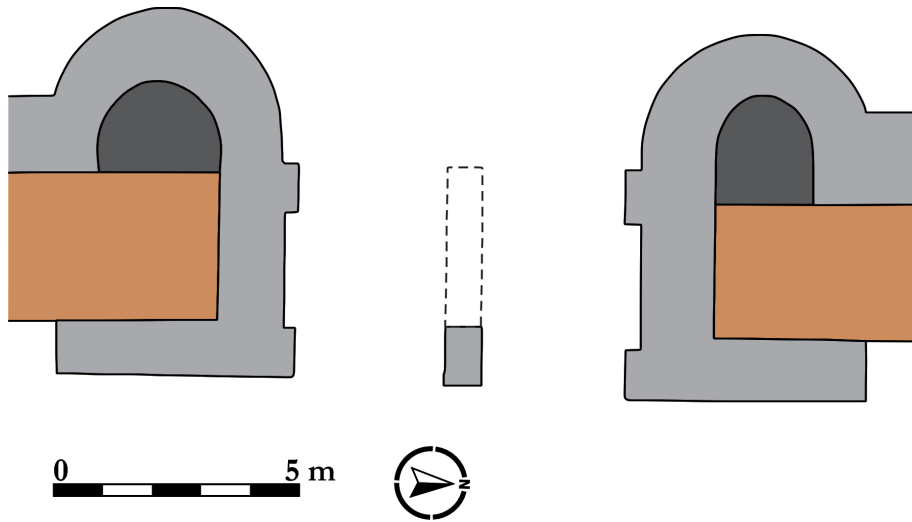


Fig. 15. Bologa, *porta principalis sinistra* (after GUDEA 1997, 86, fig. 18/2).

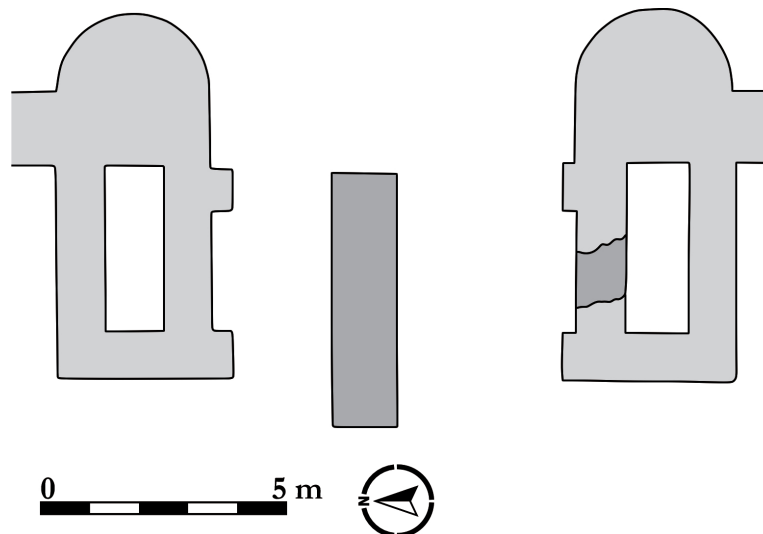


Fig. 16. Bologa, *porta principalis dextra* (after ALICU 1973, 125, pl. III/7).

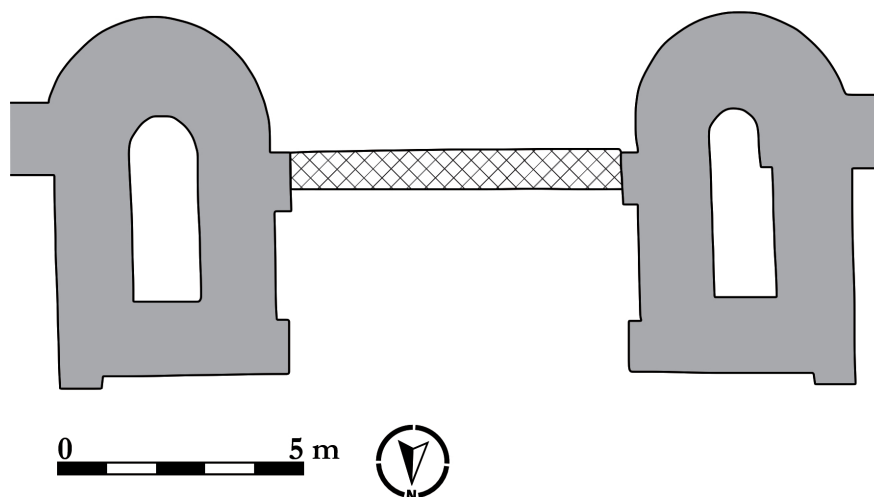


Fig. 17. Bologna, *porta decumana* (after GUDEA 1997, 86, fig. 18/1).

5.3. Buciumi

5.3.1. Buciumi, *porta praetoria*

The *porta praetoria* (Fig. 18) is located in the southeastern part of the fortification (Pl. IV). The overall width of the gate entrance measured 8 metres. The gateway is double-portalled, a central wall (1.05 × 5.8 m) divides the entrance into two equal entry points.

The towers were built in rectangular shape and protrude 1.5 metres from the fortification's wall. The tower's dimensions are identical, both measuring 5 × 7 m. The walls were built of quarried limestone using the *opus incertum* technique and are generally 0.9–1 metre wide. The roofing is indicated by *tegulae* and *imbrex* fragments.

Its construction style differs from the camp's other gate towers (presumably built in stone in the middle of the 2nd century). The entrance to the towers was on the ground floor, but it is unmarked on the original floor plan. The *porta praetoria*, together with the *porta principalis sinistra*, was used to enter the *castrum*.⁸⁹

5.3.2. Buciumi, *porta principalis sinistra*

The *porta principalis sinistra* (Fig. 19) is located in the northeastern part of the fortification (Pl. IV). The overall width of the gate entrance measured 8.8 metres. The gateway is

double-portalled, a central wall (1.1 × 5.8 m) divides the entrance into two equal entry points.

The towers are rounded in shape and have sizeable protrusions of 3.25 metres. Their dimensions are practically the same, the left measuring 6 × 8.5 m, while the right 6.5 × 8.5 m. The walls were built of quarried limestone using the *opus incertum* technique and are 1.1–1.25 metres wide. The roofing of the towers is indicated by *tegulae* and *imbrex* fragments.

The entrance to the towers was certainly on the ground floor, although it isn't marked on the original ground plan. The *porta principalis sinistra*, together with the *porta praetoria*, was used to enter the *castrum*.⁹⁰ The gate is dated to the beginning of the 3rd century CE or the reign of Caracalla.⁹¹

5.3.3. Buciumi, *porta principalis dextra*

The *porta principalis dextra* (Fig. 20) is located in the southwestern part of the fortification (Pl. IV). The gate is single-portalled, its entrance measures 6.3 metres.

The gate towers have rounded plans and protrude 3 metres from the stone precinct. The dimensions are virtually the same, the left tower measures 6 × 8 m, while the right tower 6.3 × 8 m. The walls were built of quarried limestone using the *opus incertum* technique and are 0.8–1

⁸⁹ GUDEA 1997a, 40–44.

⁹⁰ GUDEA 1997a, 40–44.

⁹¹ GUDEA 1997a, 54.

metre wide. The roofing of the towers is indicated by *tegulae* and *imbrex* fragments.

The entrance to the towers was on the ground floor. The gate was not used for passage.⁹² Its construction is dated to the beginning of the 3rd century CE or the reign of Caracalla.⁹³

5.3.4. Buciumi, *porta decumana*

The *porta decumana* (Fig. 21) is located in the northwestern part of the fortification (Pl. IV). The gate is single-portalled and is 3.6 metres wide.

The towers are rounded in shape and have protrusions of 1.35 metres. They are identical in dimensions, both measuring 4.15×7.3 m. The walls were built of quarried limestone using the *opus incertum* technique and are 1–1.25 metres wide. The roofing of the towers is indicated by fragments of *tegulae* and *imbrex*.

The gate was not used for passage, no *via decumana* has been identified in the area. During the excavations, a channel was identified between the towers through which water flowed into the *castrum*.⁹⁴ While this is a possibility,

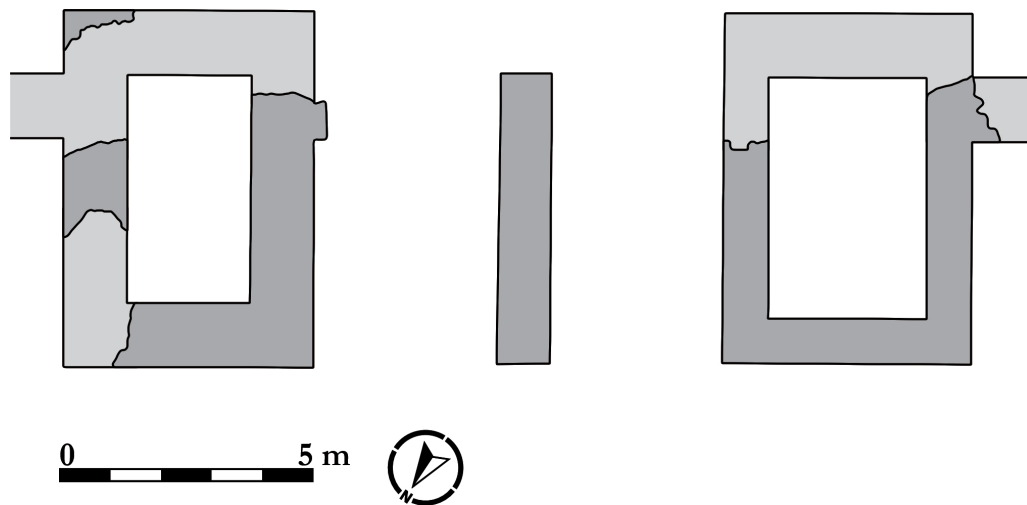


Fig. 18. Buciumi, *porta praetoria* (after CHIRILĂ ET AL. 1972, fig. 20).

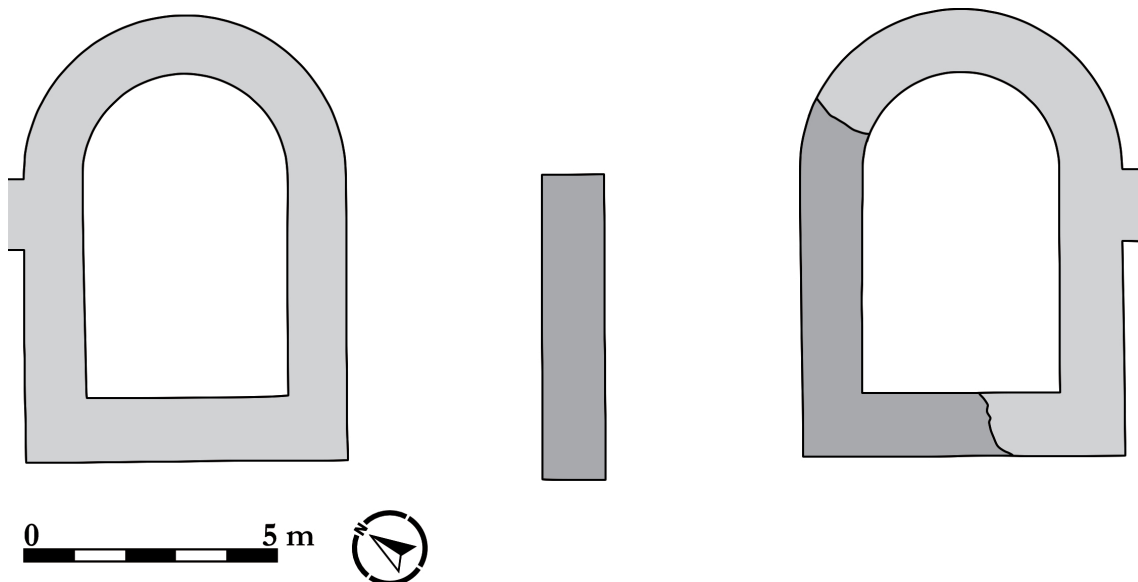
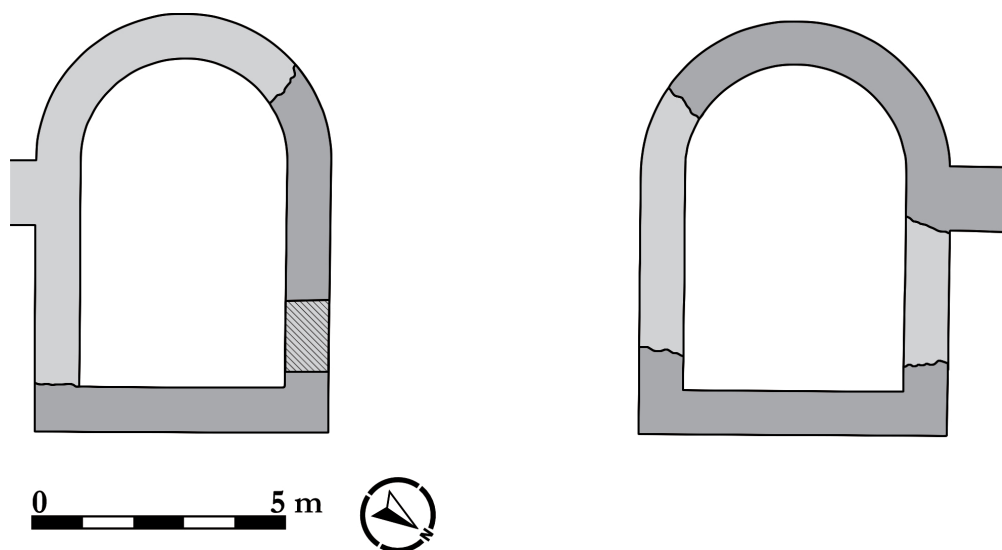
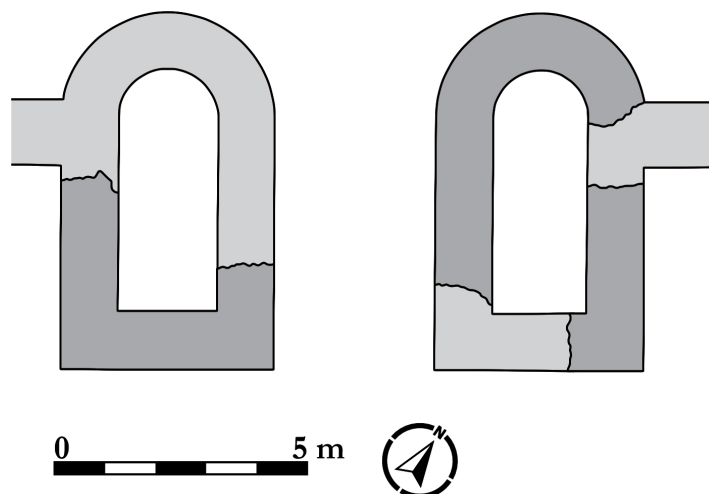


Fig. 19. Buciumi, *porta principalis sinistra* (after CHIRILĂ ET AL. 1972, fig. 16).

⁹² GUDEA 1997a, 40–44.

⁹³ GUDEA 1997a, 54.

⁹⁴ GUDEA 1997a, 40–44.

Fig. 20. Buciumi, *porta principalis dextra* (after CHIRILĂ ET AL. 1972, fig. 17).Fig. 21. Buciumi, *porta decumana* (after CHIRILĂ ET AL. 1972, fig. 18).

it should also be considered that the channel may have served as a drainage system. The entrances to the towers were in all likelihood on the ground floor, however, neither of these were marked on the original ground plan. The construction of the gate is dated to the beginning of the 3rd century CE or the reign of Caracalla.⁹⁵

5.4. Românași / Largiana

5.4.1. Românași, *porta praetoria*

The *porta praetoria* is located on the eastern side of the fortification (Pl. V). The gateway is single-portalled and has a width of 4.3 metres.

The towers are rectangular and have notable protrusions of 1.85 metres. The left tower's surface area is 4.2×7.3 m, while the right is 5.3×7.3 m. Its walls were made of river cobbles and quarried stone using the *opus incertum* technique, with the general width of 1.2 metres. The roofing of the towers is indicated by *tegulae* fragments.

Its towers were built on the levelled *agger* of the previous phase. The gate was only partially excavated, but most of the stone material of the walls had already been robbed.⁹⁶ The construction should be dated to the middle or the second part of the 2nd century CE.

⁹⁵ GUDEA 1997a, 54.

⁹⁶ MACREA ET AL. 1962, 499–500; TAMBA 1997, 23.

5.5. Romita / Certiae

5.5.1. Romita, *porta praetoria*

The *porta praetoria* (Fig. 22) is located in the northern part of the fortification (Pl. VI). The overall width of the gate entrance is 10.6 metres. The gateway is double-portalled, a central wall (2 × 5.5 m) divides the entrance into two equal entry points.

The towers are rectangular in plan and are built with protrusions of 2.2 metres. The left tower's width is unknown, but its length is 9

caused its collapse. As a result, the northern wall was rebuilt and the western wall was widened: the wall thickness on the northernmost side was increased to 2.95 metres. The researchers date the repairs to the second half of the 3rd century and presume that following the retreat from Porolissum, the gateway was reopened.⁹⁸

5.5.2. Romita, *porta principalis sinistra*

The *porta principalis sinistra* is located on the western side of the fortification (Pl. VI). The overall width of the gate entrance measured

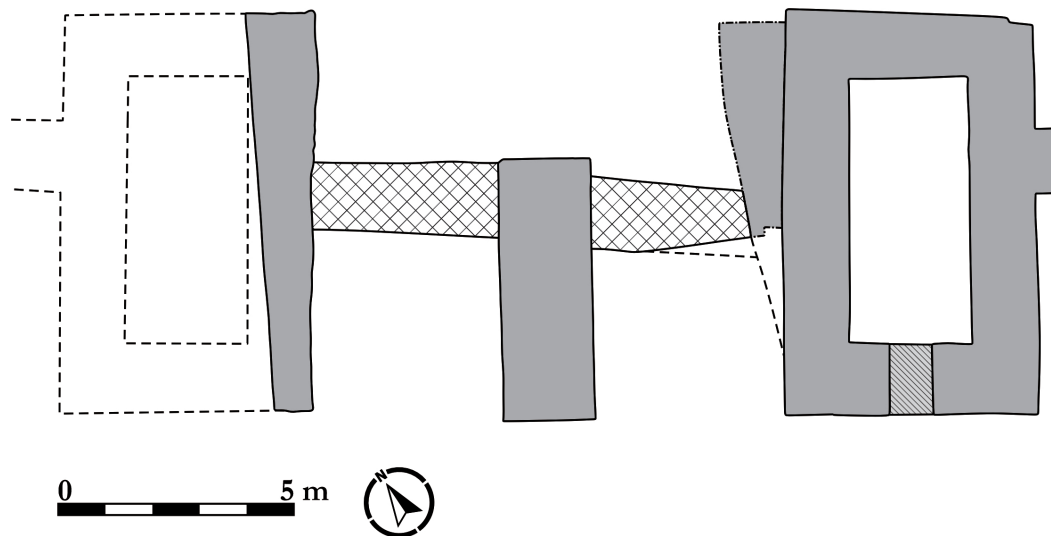


Fig. 22. Romita, *porta praetoria* (after: MATEI-BAJUSZ 1997, 170, pl. XVII).

metres. The right tower's dimensions are 5.65 × 9.5 m. The walls were built of quarried, worked stone using the *opus incertum* technique, and are 1.4–1.6 metres wide. The roofing is indicated by *tegulae* fragments.

According to the researchers, the stone gate was built in the first part of the 2nd century. The gateway was blocked relatively early, in the first part of the 2nd century,⁹⁷ with a 1.4–1.6 metres wide wall. After the gateway blockage, traces of a dwelling were identified in the eastern entrance.

The entrance to the right tower was on the ground floor through a one-metre-wide door. The tower's northern wall was built directly above the centre of the earlier, timber-turf fortification's first defensive ditch, which in time

10 metres. The gateway is double-portalled, a two-metre-wide central wall divides the entrance into two equal entry points.

The towers have rounded shapes. Their dimensions are identical, both have a surface area of 5.5 × 9.5 m. The walls were built of quarried, worked stone, and are 1.45 metres wide. The roofing of the towers is indicated by *tegulae* and *imbrex* fragments.

The gateway was blocked for an extended period of time. While the southern entry was reopened, in the northern half a dwelling area with *cocciopesto* flooring was identified. Relatively late repairs can also be observed, which reused even monuments from the Roman cemetery.⁹⁹

⁹⁷ This dating is based on monetary finds, namely a few coins of Emperor Hadrian and Empress Sabina.

⁹⁸ MATEI-BAJUSZ 1997, 42–58.

⁹⁹ MATEI-BAJUSZ 1997, 38–42.

The original plan from the monograph (Pl. VI) proposed rectangular gate towers for the *portae principales*, but the more recent geophysical survey (Pl. VII) indicates rounded ones.

5.6. Porolissum-Pomăt

5.6.1. Porolissum-Pomăt, *porta praetoria*

The *porta praetoria* (Fig. 23) is located in the northeastern part of the *castrum* (Pl. VIII–IX). The width of the gate entrance is 7.5 metres. The gateway is double-portalled, a central wall¹⁰⁰ divides the entrance into two equal entry points.

The towers have rounded shapes and protrude 2 metres from the stone precinct. Their dimensions are practically identical, the left tower measures 4.8 × 9 m, while the right tower is 4.9 × 9 m. The walls were built of quarried, worked stone in the *opus incertum* technique and are 0.9–1 metre wide.¹⁰¹

The inside of the towers was divided into two parts by a central wall. Their semicircular projections were filled with soil similar to that of the *agger*, structurally reinforcing the towers. The walls facing the gate opening are equipped with 2 pairs of buttresses: an outer and an inner one. Of the two towers only the southeastern one was inhabited.¹⁰² According to E. Tóth, after a certain point the gate entrance was blocked.¹⁰³ The construction of the gate can be precisely dated to the year 213 CE.¹⁰⁴

5.6.2. Porolissum-Pomăt, *porta principalis sinistra*

The *porta principalis sinistra* (Fig. 24) is located in the northwestern part of the fortification (Pl. VIII–IX). The width of the gate entrance measured 7.5 metres. The gateway is

double-portalled, a central wall¹⁰⁵ divides the entrance into two equal entry points.

The towers have rounded plans and were built with protrusions of 2 metres. Their dimensions are practically identical, the left measures 5.09 × 9.3 m, while the right 5 × 9.25 m. The walls were built of quarried stone using the *opus incertum* technique and are 1 metre wide.

The inside of the towers was divided into two parts by a central wall. Their semicircular projections were filled with soil similar to that of the *agger*, structurally reinforcing the towers. The walls facing the gate opening are equipped with 2 pairs of buttresses: an outer and an inner one.¹⁰⁶ According to E. Tóth both openings of the gate were blocked, in which fragments of inscriptions and monuments were also used.¹⁰⁷ The gates of the *castrum* are dated to 213 CE.¹⁰⁸

5.6.3. Porolissum-Pomăt, *porta principalis dextra*

The *porta principalis dextra* is located in the southeastern part of the *castrum* (Pl. VIII–IX). The width of the gate entrance is 7 metres. The gateway is double-portalled, a central wall (0.75 × 5.5 m) divides the entrance into two equal entry points.

The towers are rounded and they protrude 2 metres from the stone precinct. The left tower's dimensions are 5.2 × 9 m, while the right tower measures 5.75 × 9.75 m. The walls were built of quarried stone using the *opus incertum* technique, with a width varying between 1.3–1.5 metres.

The inside of the towers was divided into two parts by a central wall. Their semicircular projections were filled with soil similar to that of the *agger*, structurally reinforcing the towers.

¹⁰⁰ Although the exact dimensions are not given, they can be determined from the plan of the gate, on which it has a width of 1.1 metres and a length of 4.5 metres.

¹⁰¹ CHIRILĂ ET AL. 1980, 86–87.

¹⁰² GUDEA 1989, 69; GUDEA 1997b, 33–35.

¹⁰³ TÓTH 1978, 6–7.

¹⁰⁴ GUDEA 1997b, 35.

¹⁰⁵ Although the exact dimensions are not given, they can be determined from the plan of the gate, on which it has a width of 0.86 metres and a length of 5.8 metres.

¹⁰⁶ CHIRILĂ ET AL. 1980, 87; GUDEA 1997b, 33–35.

¹⁰⁷ TÓTH 1978, 7–8.

¹⁰⁸ GUDEA 1997b, 35.

Both of the towers were inhabited.¹⁰⁹ The gate can be dated to the year 213 CE.¹¹⁰

5.6.4. Porolissum, *porta decumana*

The *porta decumana* (Fig. 25) is located in the southwestern part of the fortification (Pl. VIII–IX). The gate is single-portalled with an entrance width of 4.25 metres.

The gate towers are rounded in shape and were built with protrusions of 2 metres. They are nearly identical in size, the left extends on a

surface area of 4.95×9.18 m, while the right on 4.85×8.45 m. The walls were built of quarried, worked stone and bricks in the *opus incertum* technique, and are 0.85 – 0.95 m wide.¹¹¹

The inside of the towers was divided into two parts by a central wall. Their semicircular projections were filled with soil similar to that of the *agger*, structurally reinforcing the towers. The walls facing the gate opening are equipped with 2 pairs of buttresses: an outer and an inner

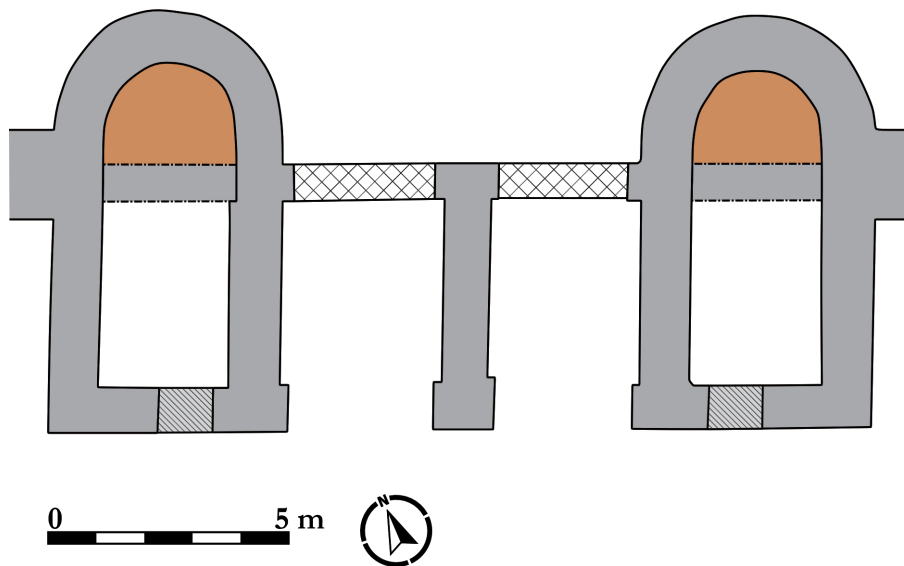


Fig. 23. Porolissum-Pomăt, *porta praetoria* (after GUDEA 1989a, 9, fig. 11).

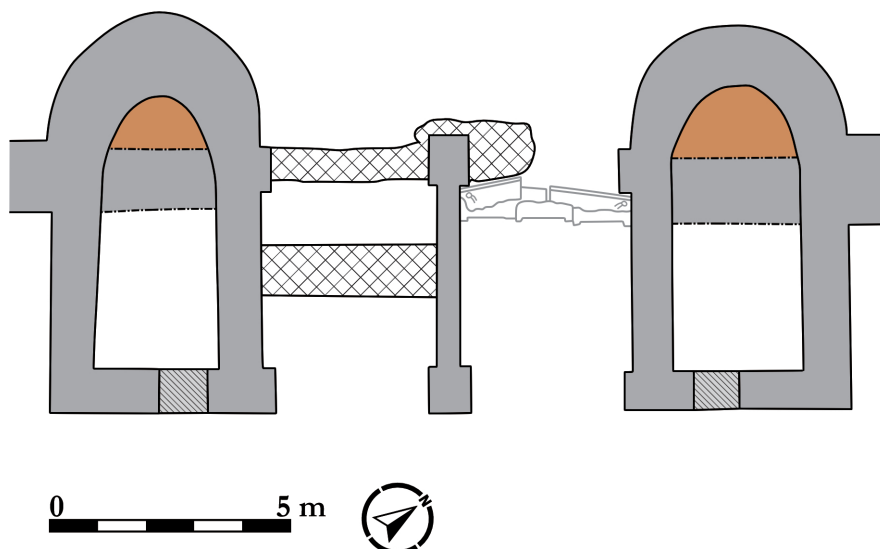


Fig. 24. Porolissum-Pomăt, *porta principalis sinistra* (after TÓTH 1978; Fig. 3).

¹⁰⁹ CHIRILĂ ET AL. 1980, 87; GUDEA 1997b, 33–35.

¹¹⁰ GUDEA 1997b, 35.

¹¹¹ CHIRILĂ ET AL. 1980, 87.

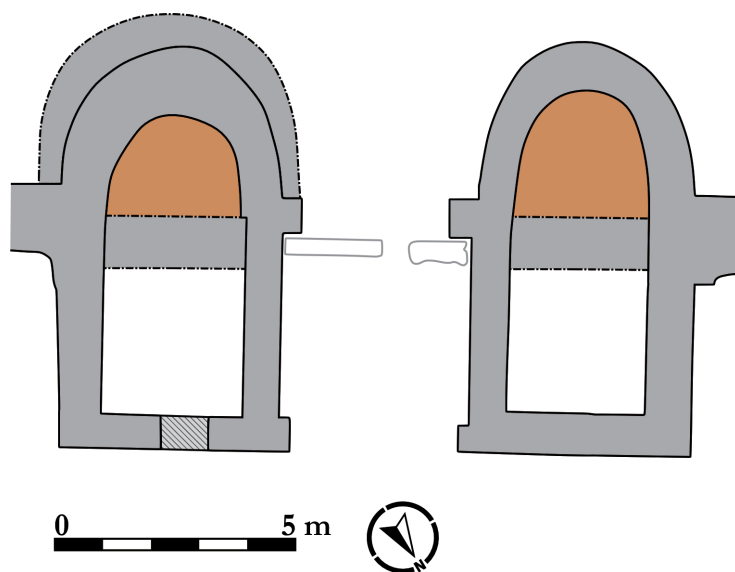


Fig. 25. Porolissum-Pomăt, *porta decumana* (after TÓTH 1978; Fig. 4).

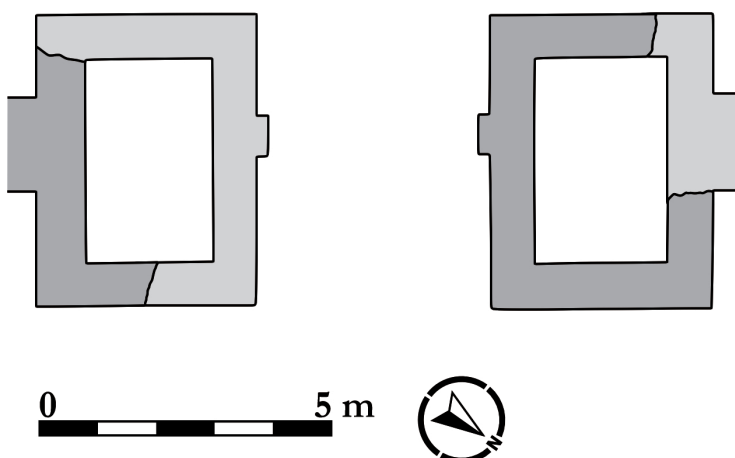


Fig. 26. Porolissum-Citera, *porta principalis sinistra* (after MACREA ET AL. 1961, 376, fig. 13).

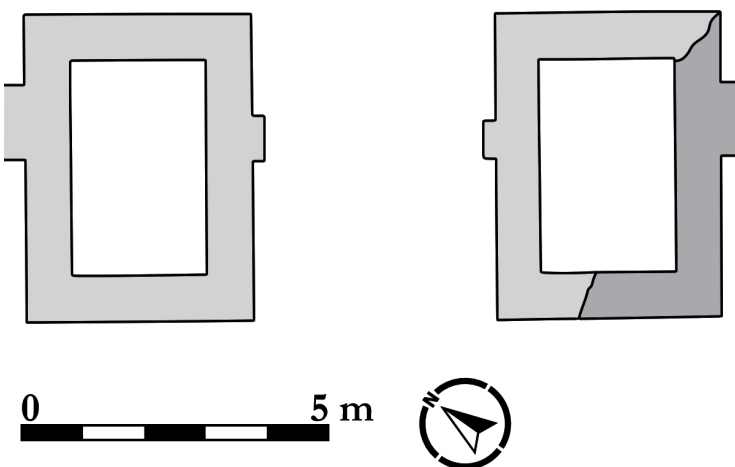


Fig. 27. Porolissum-Citera, *porta principalis dextra* (after GUDEA 1989, 372, fig. 26).

one. Both towers were inhabited.¹¹² The gates of the *castrum* are dated to 213 CE.¹¹³

5.7. Porolissum-Citera

5.7.1. Porolissum-Citera, *porta principalis sinistra*

The *porta principalis sinistra* (Fig. 26) is located in the southwestern part of the fortification (Pl. X). The gate is single-portalised with a width of 4 metres.

The rectangular gate towers were built with protrusions of 1.4 metres. Their dimensions are identical, both measure 3.7×5 m. The walls were built of quarried stone using the *opus incertum* technique, and are 0.8 metres wide. The roofing of the towers is indicated by *tegulae* and *imbrex* fragments.¹¹⁴

There is no detectable road at the entrance to the gate, so its use is questionable. The towers were built on the *agger* of the earlier phase. The walls facing the gateway had a pair of buttresses, the distance between them being 3.5 metres.¹¹⁵ The gate is dated to the middle or the second part of the 2nd century CE.¹¹⁶

5.7.2. Porolissum-Citera, *porta principalis dextra*

The *porta principalis dextra* (Fig. 27) is located in the northeastern part of the fortification (Pl. X). The gate is single-portalised and is 4 metres wide.

The towers are rectangular and were built with a protrusion of 1.15 metres. Their dimensions are identical, both have a surface area of 3.7×5 m. The walls were built of quarried stone using the *opus incertum* technique and are 0.7 – 0.75 metres wide. The roofing of the towers is indicated by *tegulae* and *imbrex* fragments.¹¹⁷

The walls facing the gateway had a pair of buttresses, the distance between them being 3.5 metres.¹¹⁸ The gate is dated to the middle or the second part of the 2nd century CE.¹¹⁹

5.8. Tihău

5.8.1. Tihău, *porta praetoria*

The *porta praetoria* is located in the southeastern part of the fortification (Pl. XI). The gate entrance has a width of 9 metres, it was most certainly double-portalised.

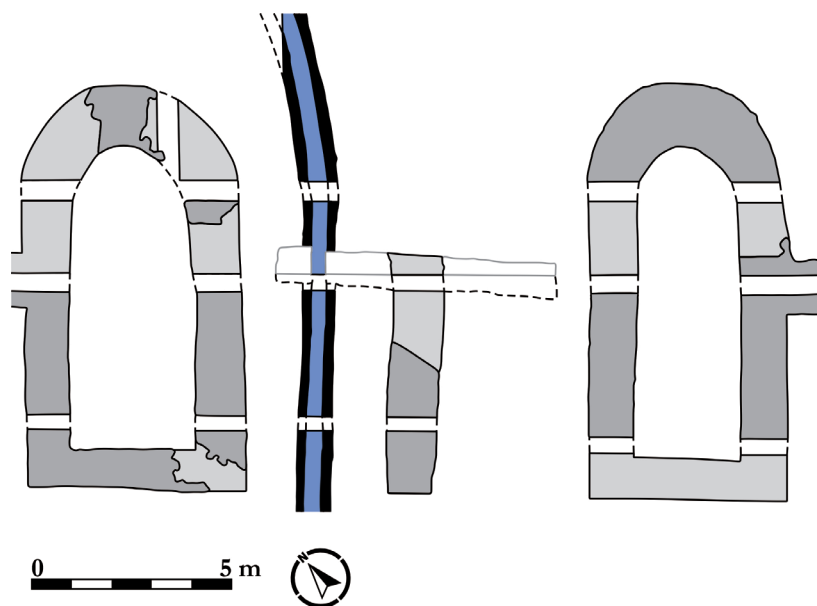


Fig. 28. Cășeu, *porta praetoria* (after ISAC 2003, 215, fig. 7–7a).

¹¹² GUDEA 1997b, 33–35.

¹¹³ GUDEA 1997b, 35.

¹¹⁴ GUDEA 1989, 90–91.

¹¹⁵ GUDEA 1989, 90–91.

¹¹⁶ MACREA ET AL. 1961, 375–376.

¹¹⁷ GUDEA 1989, 90.

¹¹⁸ GUDEA 1989, 90.

¹¹⁹ MACREA ET AL. 1961, 375–376.

The exact shape and type of the towers cannot be determined, but their dimensions are approximately 6×6 m.¹²⁰ The construction material is presumably similar to that of the stone precinct, which was built of river and quarried stone in *opus incertum* technique.¹²¹

5.8.2. Tihău, *porta principalis sinistra*

The *porta principalis sinistra* is located in the southwestern part of the fortification (Pl. XI). The gate entrance has a width of 9 metres, it was most certainly double-portalled.

The exact shape and type of the towers cannot be determined, but their dimensions are approximately 6×6 m.¹²² The construction material is presumably similar to that of the stone precinct, which was built of river and quarried stone in *opus incertum* technique.¹²³

5.8.3. Tihău, *porta principalis dextra*

The *porta principalis dextra* is located in the northeastern part of the fortification (Pl. XI).

The gate entrance has a width of 9 metres, it was most certainly double-portalled.

The exact shape and type of the towers cannot be determined, but their dimensions are approximately 6×6 m.¹²⁴ The construction material is presumably similar to that of the stone precinct, which was built of river and quarried stone in *opus incertum* technique.¹²⁵

5.8.4. Tihău, *porta decumana*

The *porta decumana* is located in the northwestern part of the fortification (Pl. XI). The gate entrance has a width of 4 metres, it was most certainly single-portalled.

Based on geophysical measurements, J. Bennett assumed that the projection of the towers is semicircular which date from the Severan dynasty.¹²⁶ The construction material is presumably similar to that of the stone precinct, which was built of river and quarried stone in *opus incertum* technique.¹²⁷

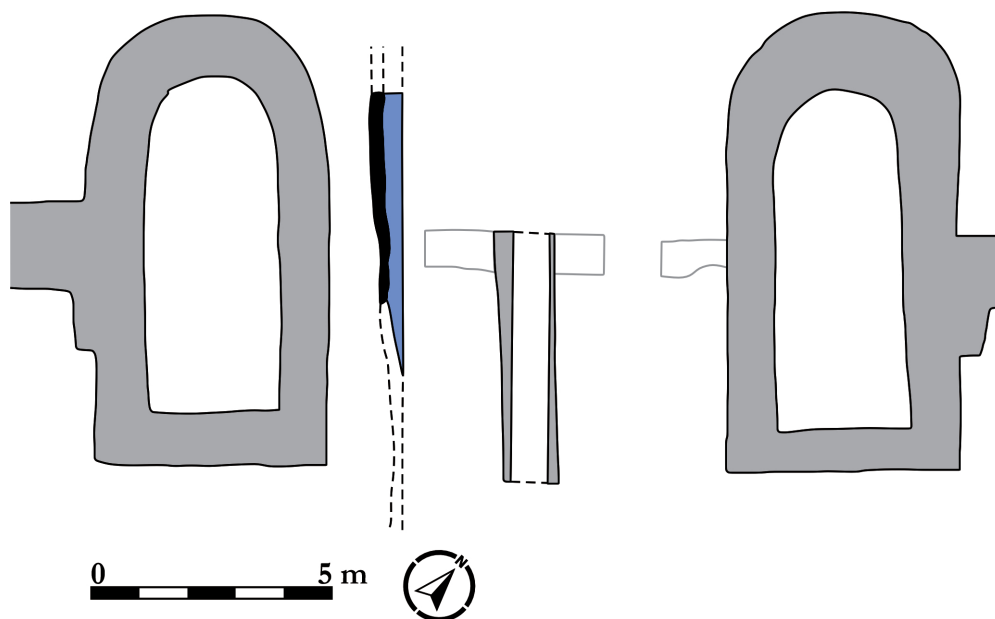


Fig. 29. Cășeiu, *porta principalis sinistra* (after, Isac 2003, 217, fig. 8).

¹²⁰ BENNETT 2006, 279–289.

¹²¹ PROTASE 1994, 80–81.

¹²² BENNETT 2006, 279–289.

¹²³ PROTASE 1994, 80–81.

¹²⁴ BENNETT 2006, 279–289.

¹²⁵ PROTASE 1994, 6.

¹²⁶ BENNETT 2006, 289.

¹²⁷ PROTASE 1994, 6.

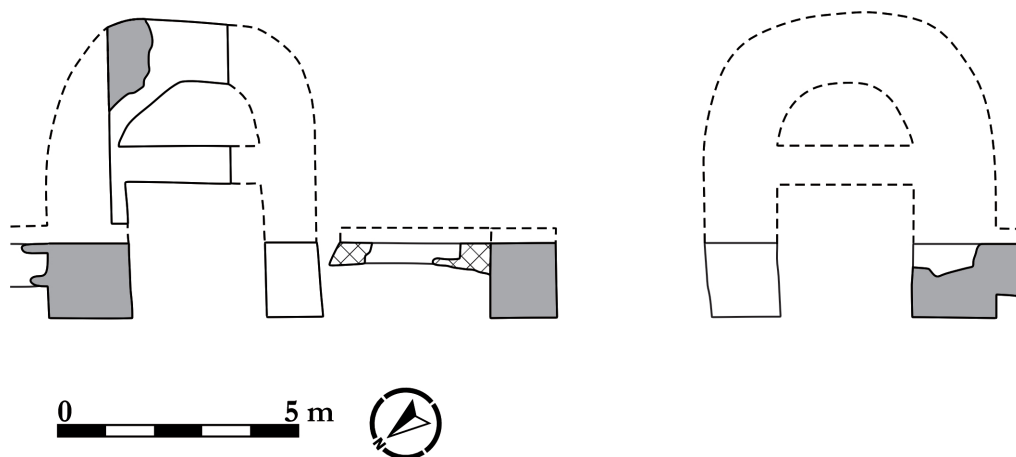


Fig. 30. Cășeiu, *porta principalis dextra* (after ISAC 2003, 215, fig. 6–6a).

5.9. Cășeiu / Samum

5.9.1. Cășeiu, *porta praetoria*

The *porta praetoria* (Fig. 28) is located in the northeastern part of the Roman fortification (Pl. XII). The overall width of the gate entrance is 8.7 metres. The gateway is double-portalled, a central wall (1.2×6 m) divides the entrance into two equal entry points.

The rounded towers have a substantial protrusion of 4.2–4.4 metres. The left tower's dimensions are 5.5×10 m, while the right tower mea-

between 1.2–1.25 metres wide. The roofing is suggested by *tegulae* fragments.

The ground floor of the towers was inhabited. The entrances couldn't be identified due to the current state of the remains. The *porta praetoria* of Cășeiu was the largest of the province's auxiliary camps. The construction of the gate is dated to the beginning of the 3rd century CE.¹²⁸

5.9.2. Cășeiu, *porta principalis sinistra*

The *porta principalis sinistra* (Fig. 29) is

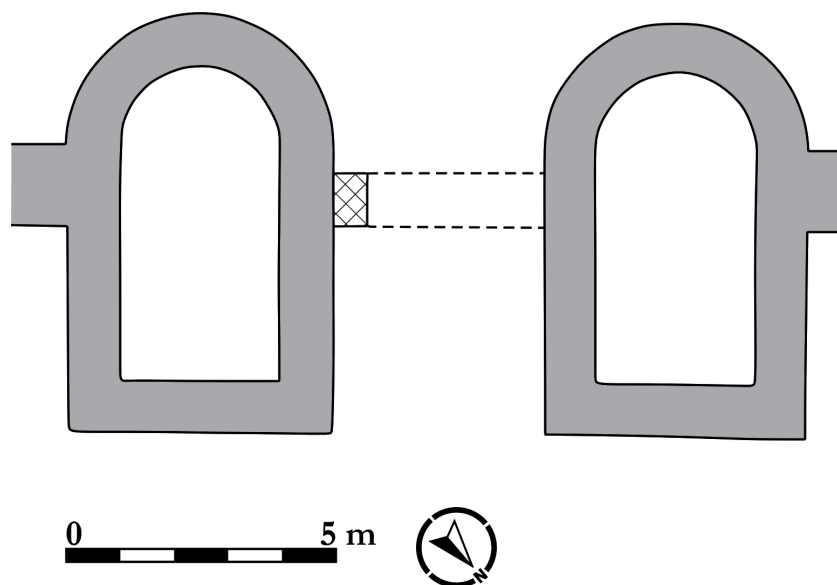


Fig. 31. Cășeiu, *porta decumana* (after ALICU 1973, 125, pl. III/8).

sures 5×10.5 m. The walls were built of river cobbles in the *opus incertum* technique, and are

located in the northwestern part of the fortification (Pl. XII). The overall width of the

¹²⁸ ISAC 2003, 82–89.

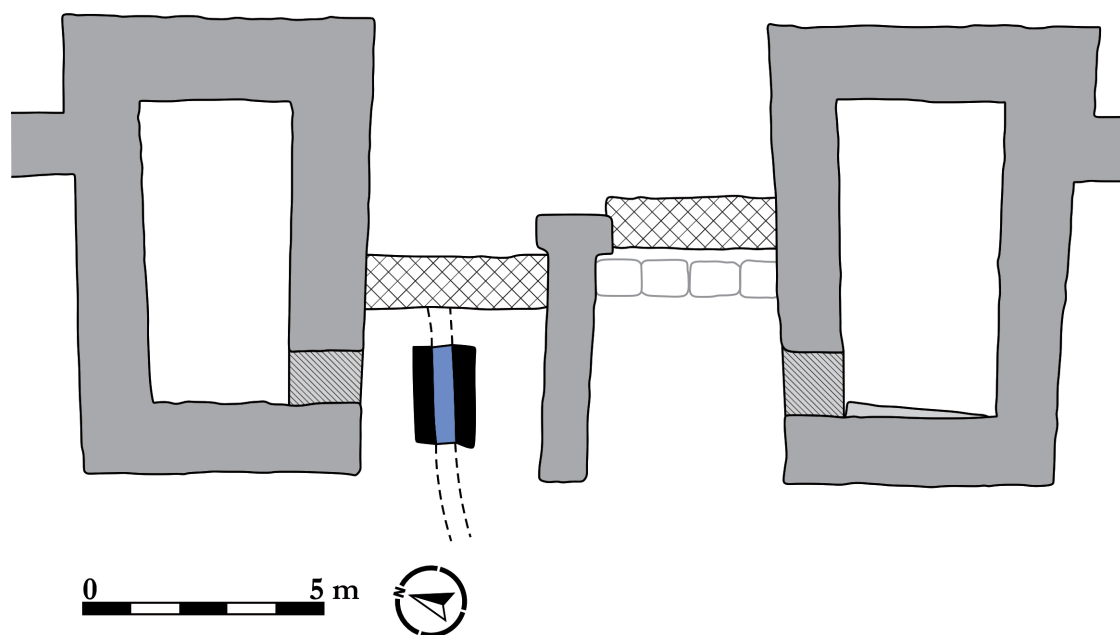


Fig. 32. Ilișua, *porta praetoria* (after PROTASE ET AL. 1997, 99, pl. XIV).

gate entrance is 8.6 metres. The gateway is double-portal, a central wall (1.15 × 5.3 m) divides the entrance into two equal entry points.

The rounded towers protrude 3.9–4.6 metres from the stone precinct. Their dimensions are identical, both measure 5 × 10 m. The walls were built of river cobbles using the *opus incertum* technique and are 1–1.2 metres wide. The roofing is indicated by *tegulae* fragments.

No *via principalis* has been discovered in the gate area, so it wasn't used for passage. In a later chronological period a dwelling was identified in its entrance. The ground floors of the towers were inhabited.¹²⁹ The gate is dated to the beginning of the 3rd century CE.

5.9.3. Cășeiu, *porta principalis dextra*

The *porta principalis dextra* (Fig. 30) is located in the southeastern part of the fortification (Pl. XII). The gate is double-portal, its entrance is divided by a 1.15 metres wide central wall.

The towers are rounded in shape. Their dimensions probably match that of the *porta*

principalis sinistra: 5 × 10 m. The walls were built using the *opus incertum* technique, of river cobbles. The roofing is indicated by *tegulae* fragments.

Most of the remains of the gate have been destroyed, mainly due to the robbing pits, but some of the wall imprints have been successfully identified. Towards the end of its use, the northern half of the gate opening was blocked. The towers were inhabited.¹³⁰ The gate is dated to the beginning of the 3rd century CE.

5.9.4. Cășeiu, *porta decumana*

The archaeological excavation of the gate was led by E. Panaitescu in the interwar period. Unfortunately, the results were only partially published.

The *porta decumana* (Fig. 31) is located in the southwestern part of the *castrum* (Pl. XII). The entrance is single-portal, but its width wasn't specified. The towers are rounded and were built with protrusions of 3 metres.¹³¹ The length of the towers is 8.2 metres.¹³² The floor

¹²⁹ ISAC 2003, 89–94.

¹³⁰ ISAC 2003, 94–104.

¹³¹ PANAITESCU 1929, 321–328.

¹³² E. Panaitescu states that the tower is 3 metres long on the outside of the stone precinct and 4 metres on the inside. Given that the stone precinct's general thickness is about 1.2 metres, the length of the tower should be estimated at 8.2 metres.

plan of the gate must be viewed with adequate criticism.

5.10. Ilişua / Arcobara

5.10.1. Ilişua, *porta praetoria*

The *porta praetoria* (Fig. 32) is located in the northeastern part of the fortification (Pl. XIII). The width of the entrance is 8–8.5 metres: the difference is due to the fact that it widens from the outside to the inside. The gate is double-portal, a central wall (0.9 × 4.7 m) divides the entrance into two equal entry points.

The rectangular towers have a 1.7 metres long protrusion. The left tower's dimensions are 5.9–6.5 × 8.25 m, while the right tower measures 5.85–7 × 8.5 m. The walls were built of quarried

5.10.2. Ilişua, *porta principalis sinistra*

The *porta principalis sinistra* is located in the northwestern part of the fortification (Pl. XIII). The 8.4 metres wide, double-portal gate entrance is divided into two equal entry points by a 1 metre thick central wall.

The towers are rectangular in shape and have a protrusion of 1.3 metres. The left tower has an extent of 6.5–6.8 × 7.5 m, while the right tower is 6.5 × 7.1 m. The walls are built of quarried stone, using the *opus incertum* technique and are 1.1–1.25 metres wide.¹³⁵

The researchers didn't mention any roof tiles from the gate's area. The fortification's other gate towers were roofed, presumably this one was too. Its construction is dated to the reign of

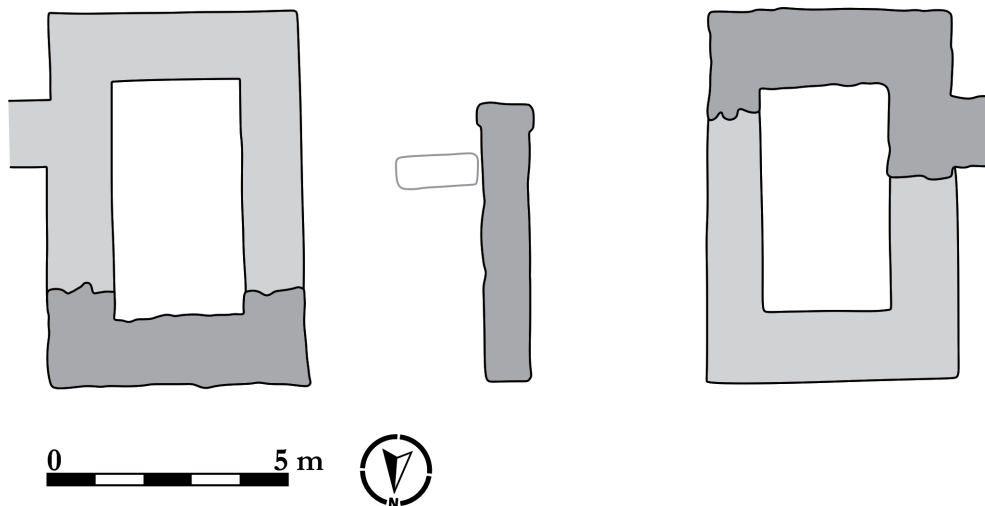


Fig. 33. Ilişua, *porta principalis dextra* (after PROTASE ET AL. 1997, 99, pl. XV).

stones, using the *opus incertum* technique, and are 1.25–1.5 metres wide. The roofing is indicated by *tegulae* and *imbrex* fragments.

The entrance of the gate was blocked in all probability in the 3rd century CE. The varying wall thickness of the towers is due to later repairs. The entrances into the towers' interiors were located in the walls facing the gate entrance.¹³³ Its construction is dated to the reign of Marcus Aurelius.¹³⁴

Marcus Aurelius.¹³⁶

5.10.3. Ilişua, *porta principalis dextra*

The *porta principalis dextra* (Fig. 33) is located in the southeastern part of the fortification (Pl. XIII). The width of the gate entrance is 7.75 metres. The gateway is double-portal, a central wall (0.9 × 5 m) divides the entrance into two equal entry points.

The rectangular towers were built with a protrusion of 1.5 metres. Their dimensions are identical, both measuring 5.5 × 7.5 m. The walls

¹³³ PROTASE ET AL. 1997, 19–21, 47–48.

¹³⁴ PROTASE ET AL. 1997, 46.

¹³⁵ PROTASE ET AL. 1997, 16–18, 49.

¹³⁶ PROTASE ET AL. 1997, 46.

were built of river cobbles, using the *opus incertum* technique and are 1.3–1.4 metres wide. *Imbrex* fragments indicate the roofing of the towers.¹³⁷

The archaeological excavations of K. Torma revealed that both entry points of the gate entrance were blocked.¹³⁸ Its construction is dated to the reign of Marcus Aurelius.¹³⁹

5.10.4. Ilișua, *porta decumana*

The *porta decumana* is located in the southwestern part of the *castrum* (Pl. XIII). The gate is single-portalled, with a width of 4.7 metres.

The towers are rectangular and protrude 1.25 metres from the stone precinct. They differ in size, the left tower measures 4.4 × 6.5 m, while the right tower is 5.5 × 6.5 m. The walls were built of river cobbles, using the *opus incertum* technique and are 0.9 metres wide. The roofing is indicated by *tegulae* and *imbrex* fragments.

Substantial quantity of its stone material has been robbed. The researchers have identified two levels of inhabitancy in the southwestern tower.¹⁴⁰ The construction of the gate is dated to the reign of Marcus Aurelius.¹⁴¹

5.11. Orheiu Bistriței

5.11.1. Orheiu Bistriței, *porta principalis sinistra*

The *porta principalis sinistra* is located in the northwestern part of the fortification (Pl. XIV). The gate entrance's width is approximately 7.4 – 7.6 metres.¹⁴² The walls of the towers measured 1.3 metres. Besides the *opus incertum* construction technique, the *opus quadratum* could also be observed: certain parts of the towers' walls were built of quadratic, quarried stone.¹⁴³

5.12. Gherla

5.12.1. Gherla, *porta principalis dextra*

The *porta principalis dextra* is located in the eastern part of the fortification (Pl. XV). The width of the entrance is 10 metres. It is double-portalled, a 1 metre wide central wall divides the entrance into two unequal entry points: 4 and 5 metres.

The towers are rectangular, with identical dimensions: 6 × 10 m. Their walls were built of quarried stone, using the *opus incertum* technique. The width, based on the fortification's stone precinct, can be estimated at 1.1–1.25 metres.¹⁴⁴

The construction is dated to the final years of Emperor Hadrian,¹⁴⁵ or the reign of Antoninus Pius.

5.12.2. Gherla, *porta decumana*

The *porta decumana* is located in the southern part of the *castrum* (Pl. XV). The gate entrance is single-portalled, its width can be estimated at 3.5 – 4 metres.

Only the eastern tower has been excavated, which is rectangular and has a protrusion of 0.8–1 metre. Its dimensions are roughly 6 × 10 m. Its walls were built of quarried stone, using the *opus incertum* technique. Based on the fortification's stone precinct, the width can be estimated at 1.1–1.25 metres.

During the 3rd century CE the north walls of the tower were reinforced with an additional 1.5 metres.¹⁴⁶ The construction is dated to the final years of Emperor Hadrian,¹⁴⁷ or the reign of Antoninus Pius.

¹³⁷ PROTASE ET AL. 1997, 29–30, 48–49.

¹³⁸ TORMA 1864–1865, 14–15.

¹³⁹ PROTASE ET AL. 1997, 46.

¹⁴⁰ PROTASE ET AL. 1997, 23, 48.

¹⁴¹ PROTASE ET AL. 1997, 46.

¹⁴² PROTASE 2008, 15.

¹⁴³ PROTASE 2008, 43–44.

¹⁴⁴ PROTASE ET AL. 2008, 35–37.

¹⁴⁵ PROTASE ET AL. 2008, 41.

¹⁴⁶ PROTASE ET AL. 2008, 35–37.

¹⁴⁷ PROTASE ET AL. 2008, 41.

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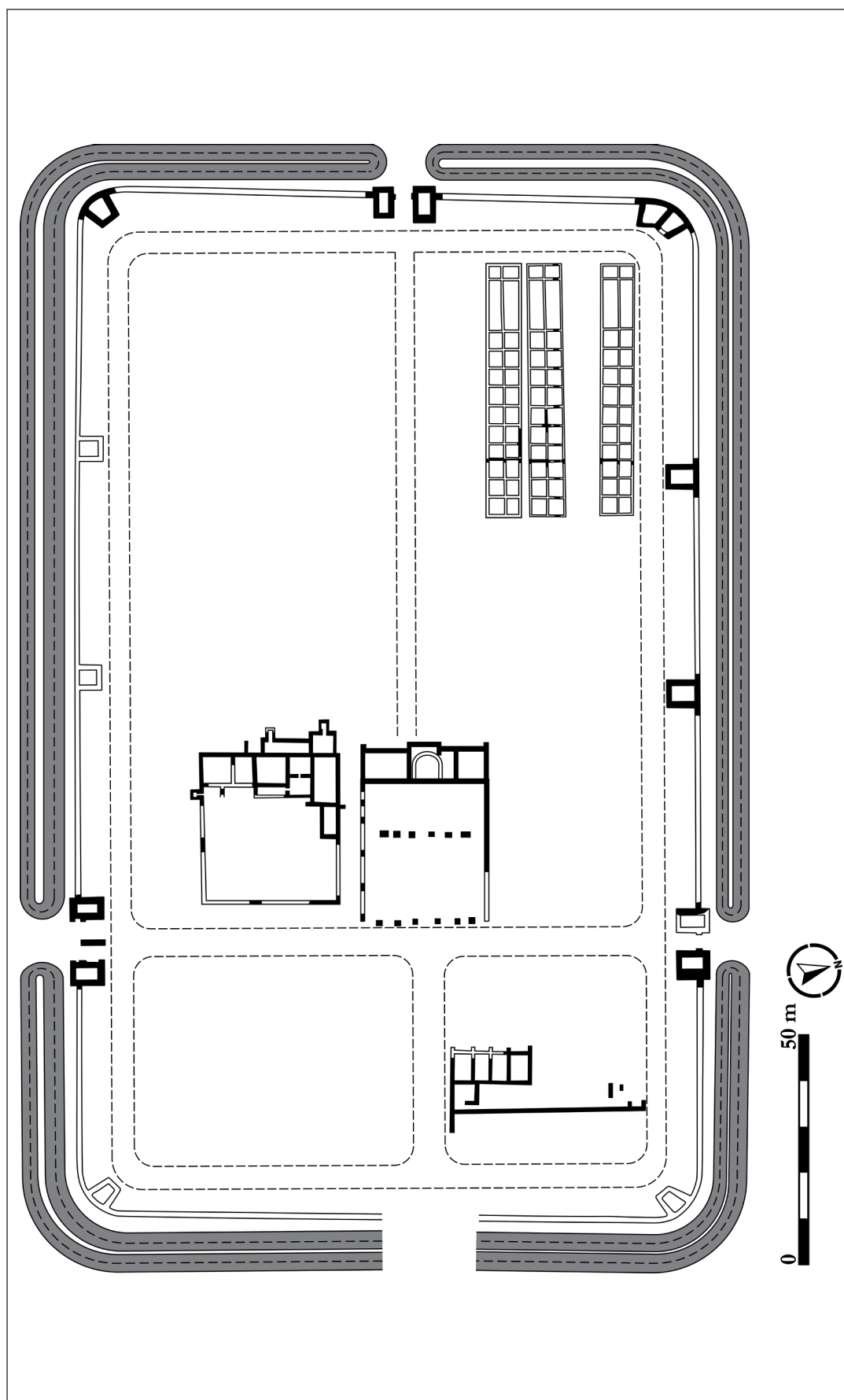


Plate II. Gilău stone phase (after IsAC 1997, 92, pl. XI).

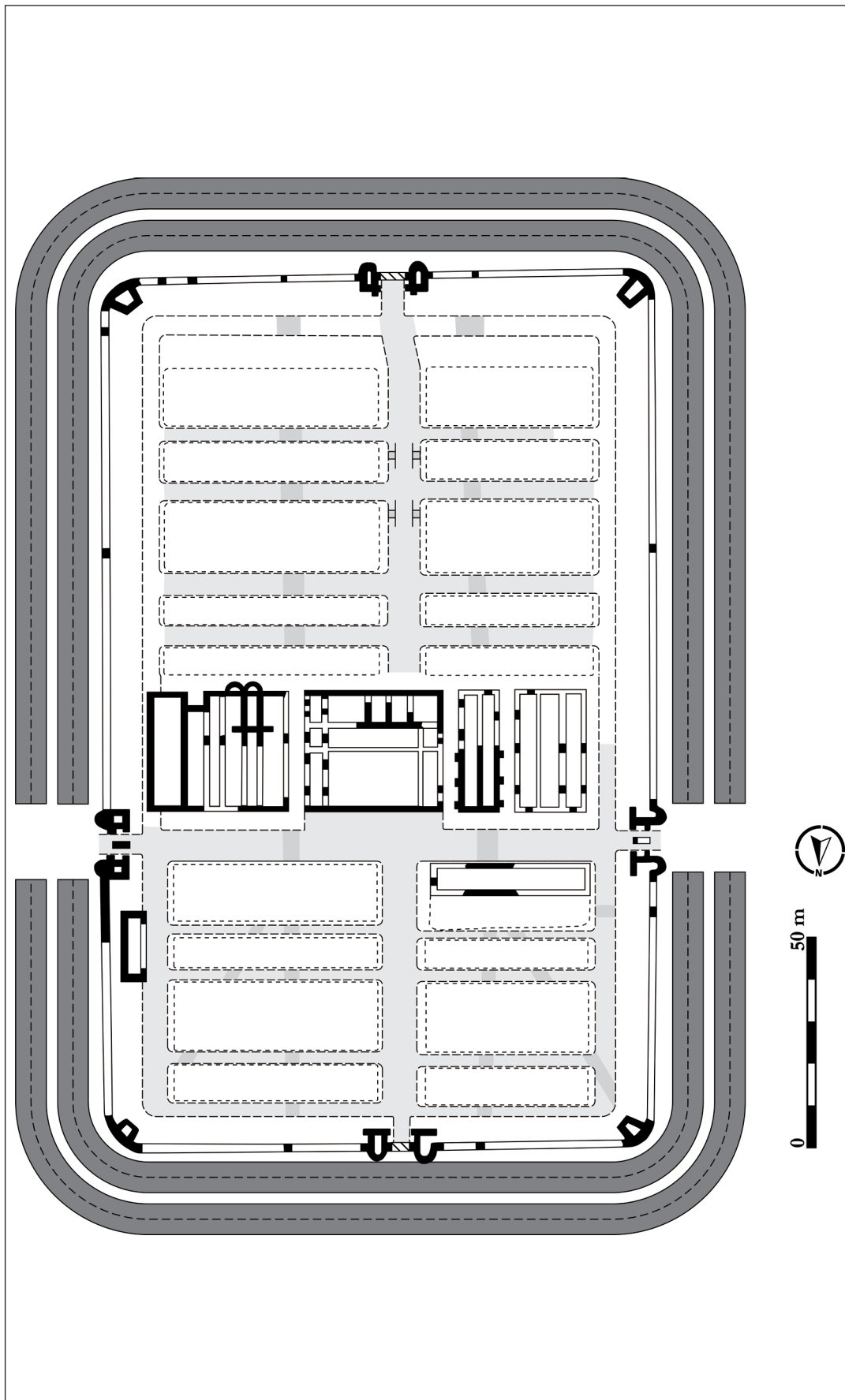


Plate III. Bologa stone phase (after GUDEA 1997, 86, fig. 18).

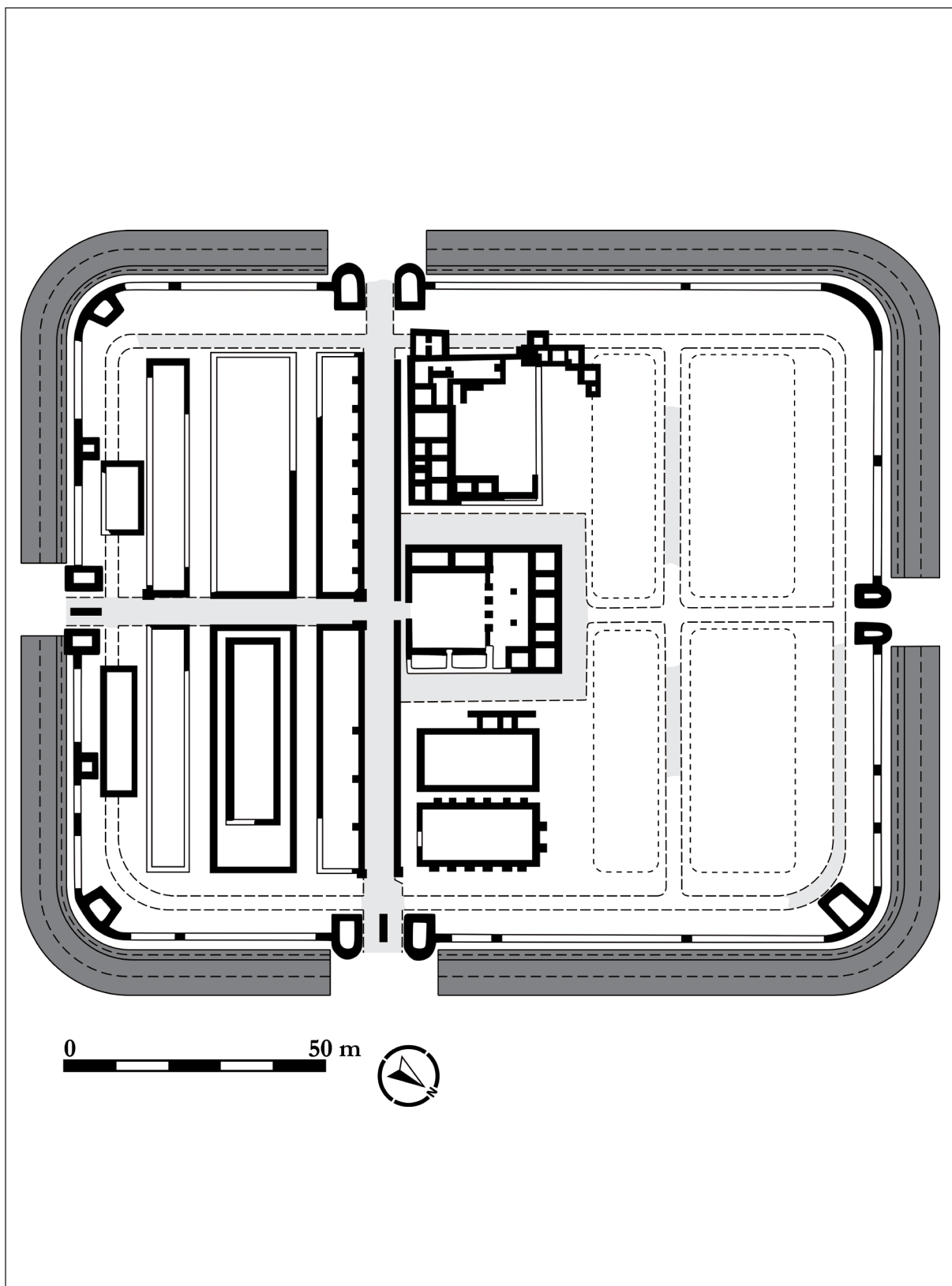


Plate IV. Buciumi stone phase (after GUDEA 1997a, 91, fig. 8).

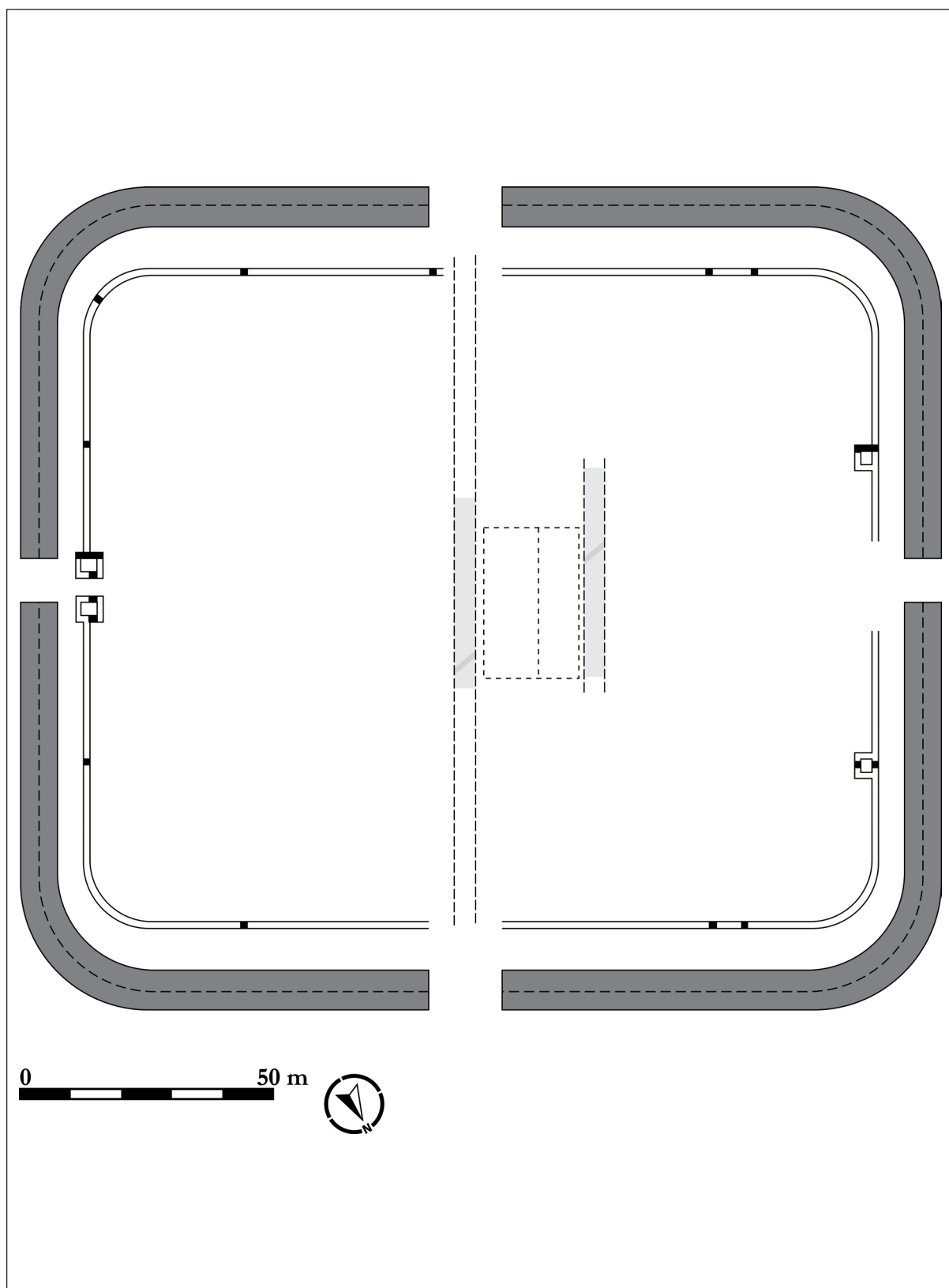


Plate V. Românași stone phase (after TAMBA 1997, 49, fig. 10).

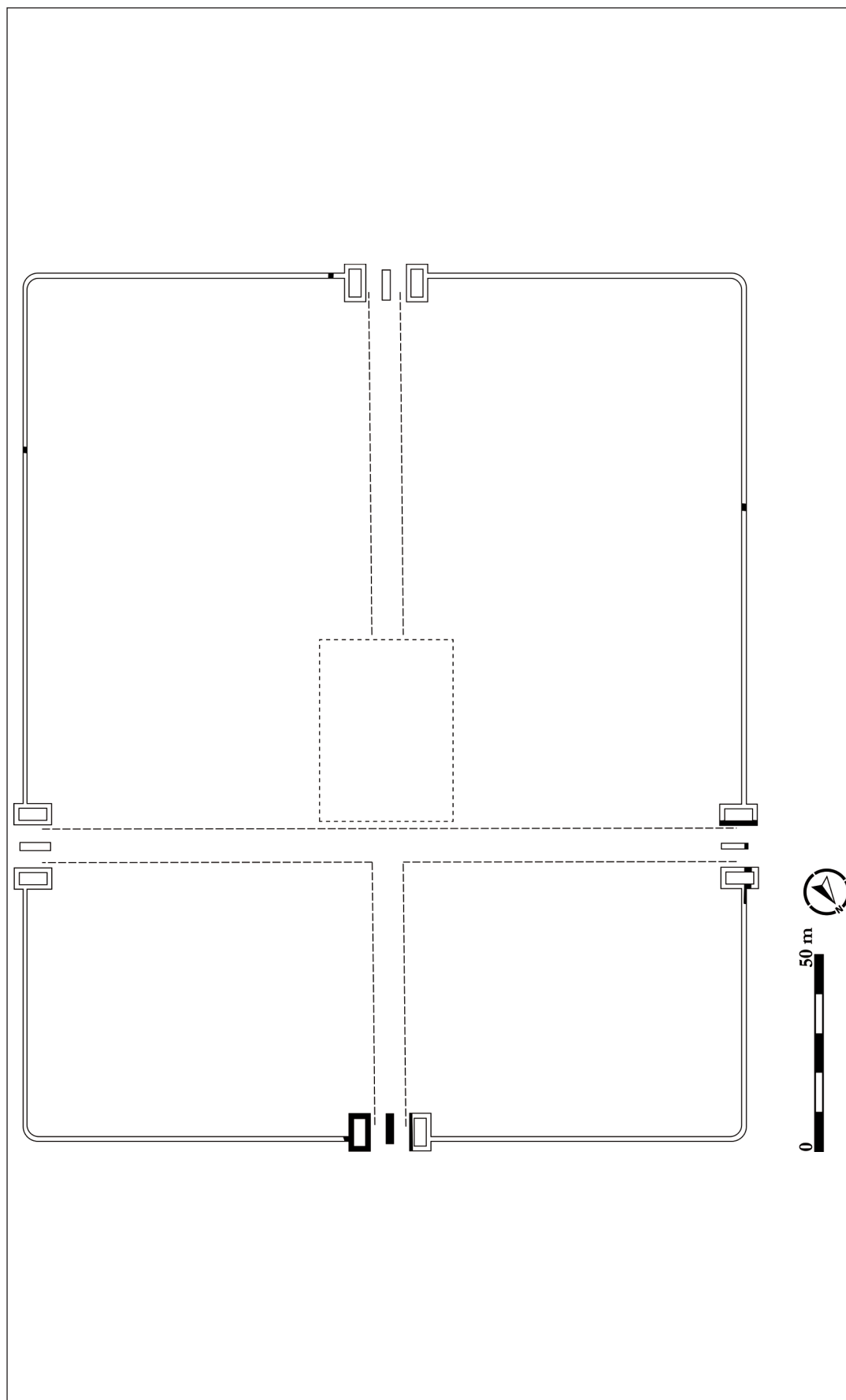


Plate VI. Romita stone phase (after MATEI-BAJUSZ 1997, 169, pl. XI).

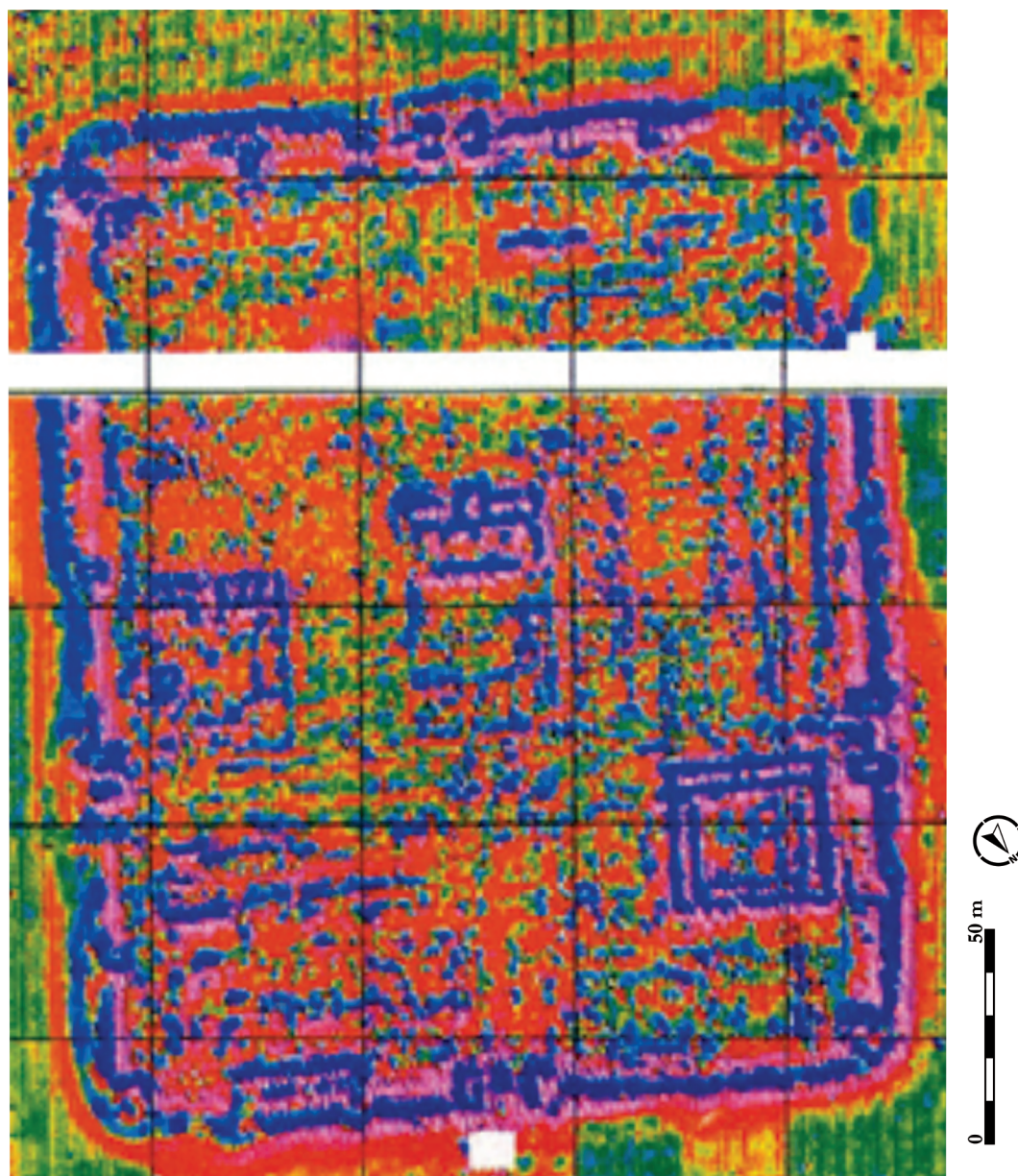


Plate VII. Romita geophysical survey (FRANZEN ET AL. 2007, 176, fig. 1; MARCU 2009, 282, pl. 14).

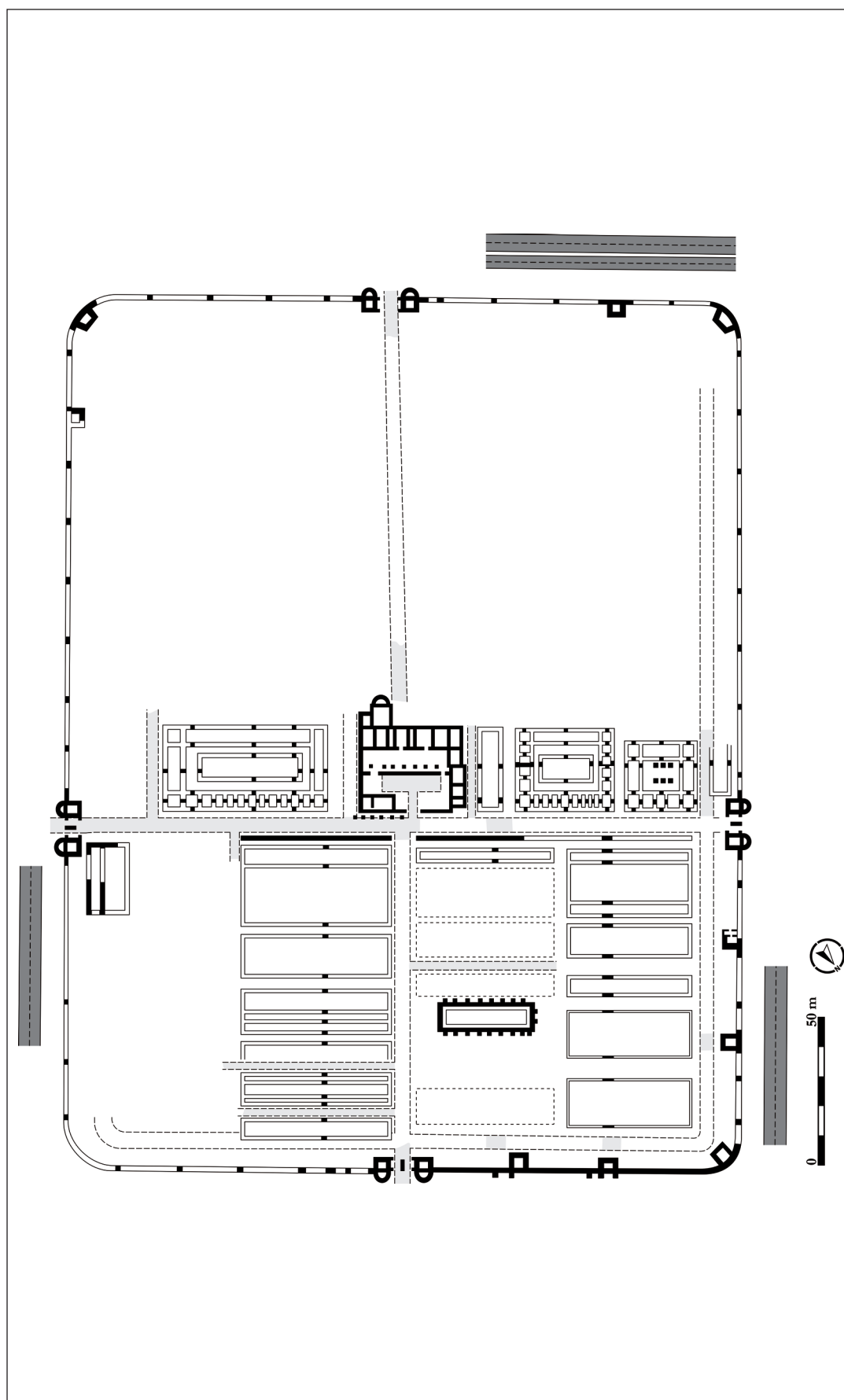


Plate VIII. Porolissum-Pomăt stone phase (after GUDEA 1997c, 47, Nr. 25).

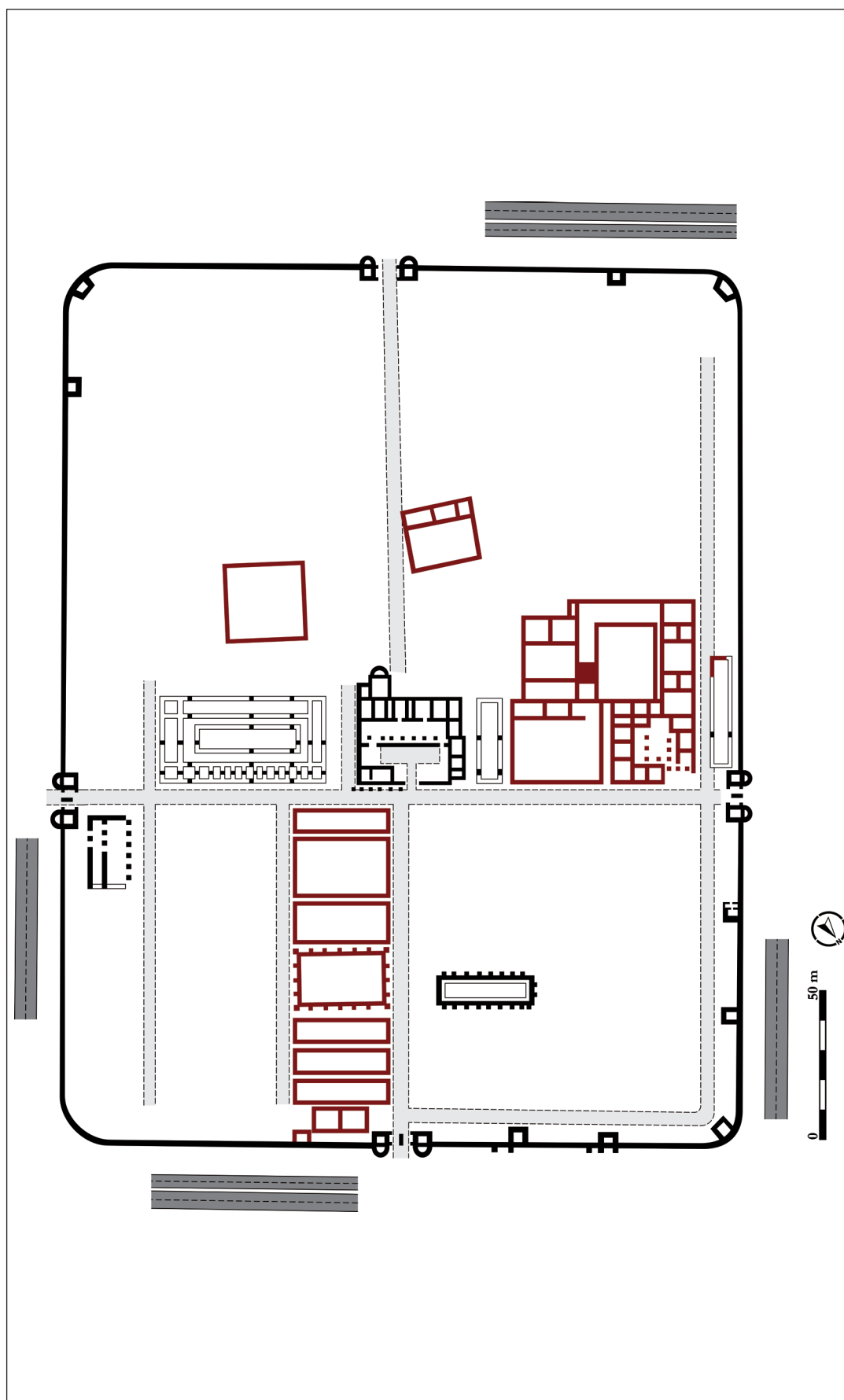


Plate IX. Porolissum-Pomăt stone phase (after OPREANU-LĂZĂRESCU 2016, 78, fig. 33).

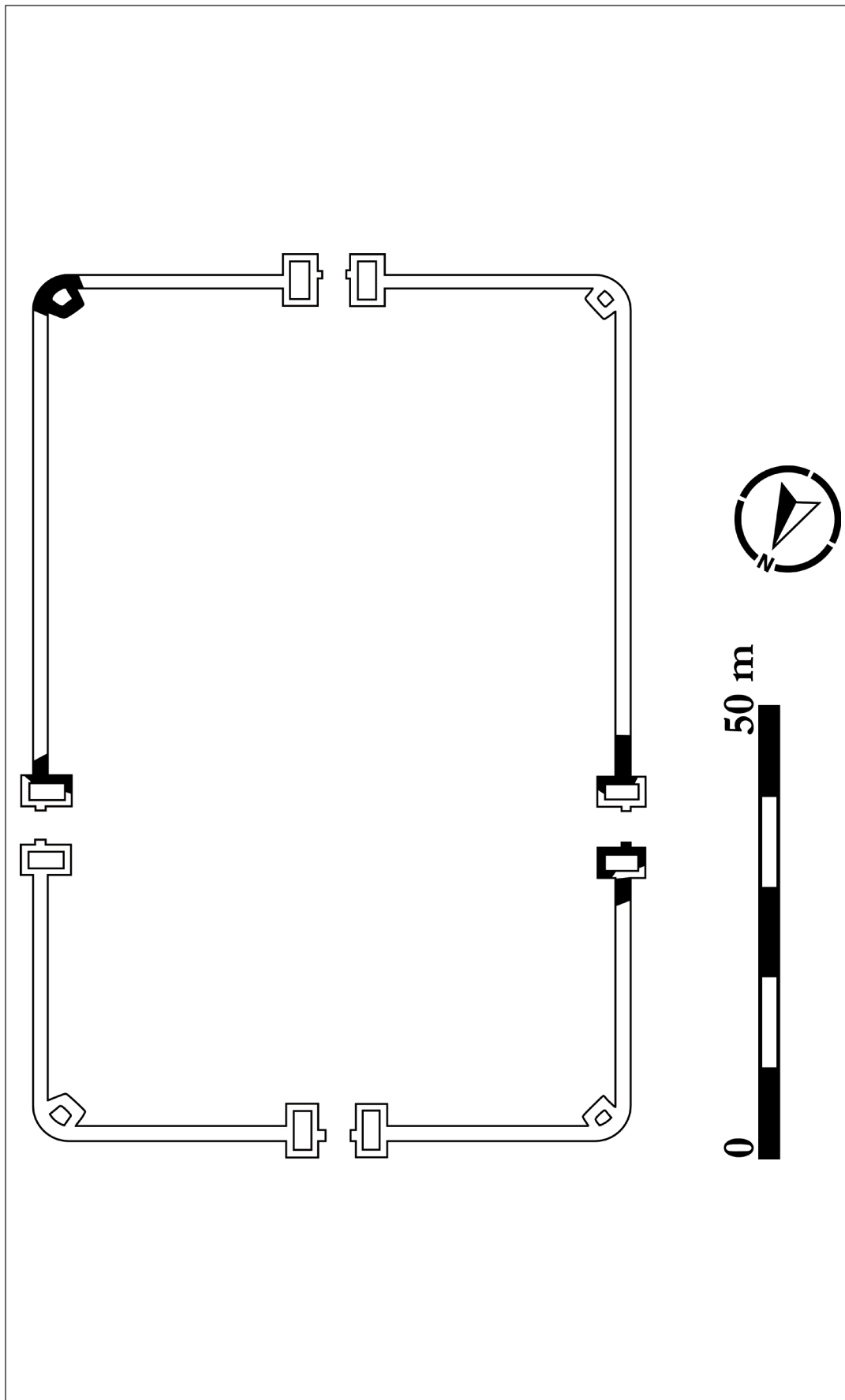


Plate X. Porolissum-Citera stone phase (after MACREA ET AL. 1961, 375, fig. 12.).

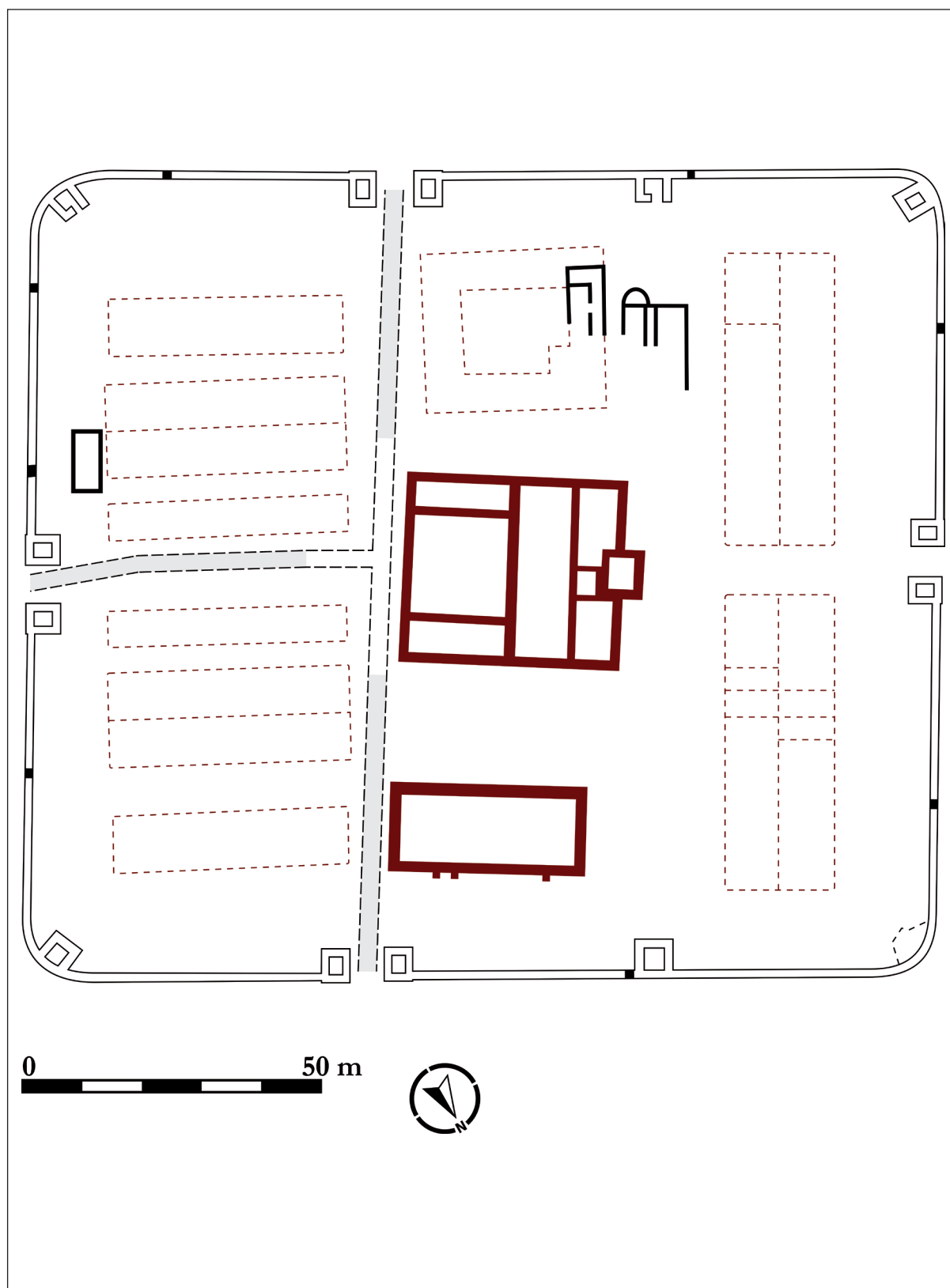


Plate XI. Tihău stone phase (after OPREANU-LĂZĂRESCU 2016, 96, fig. 55).

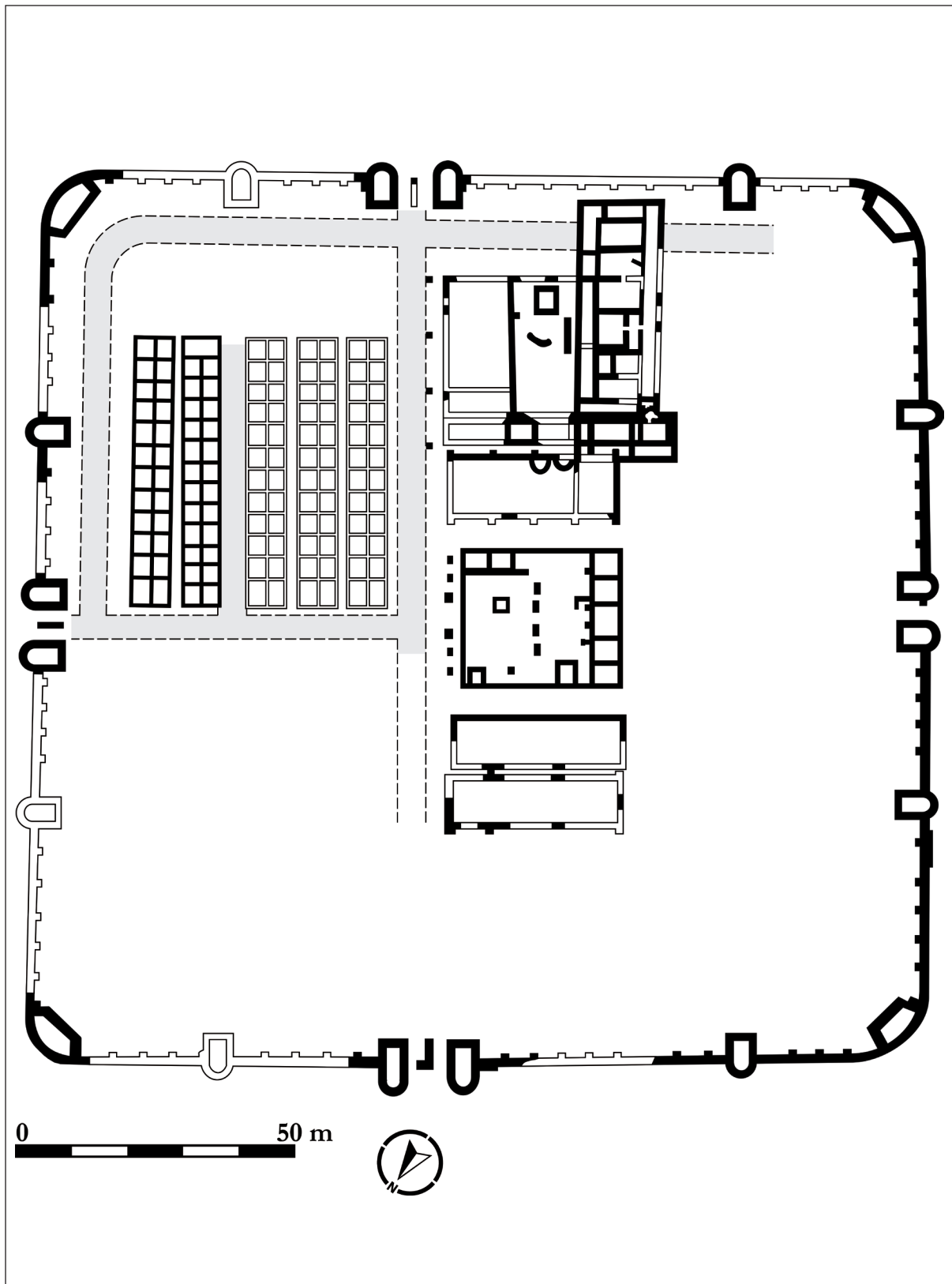


Plate XII. Cășieu stone phase (after Isac 2003, 206, fig. 2).

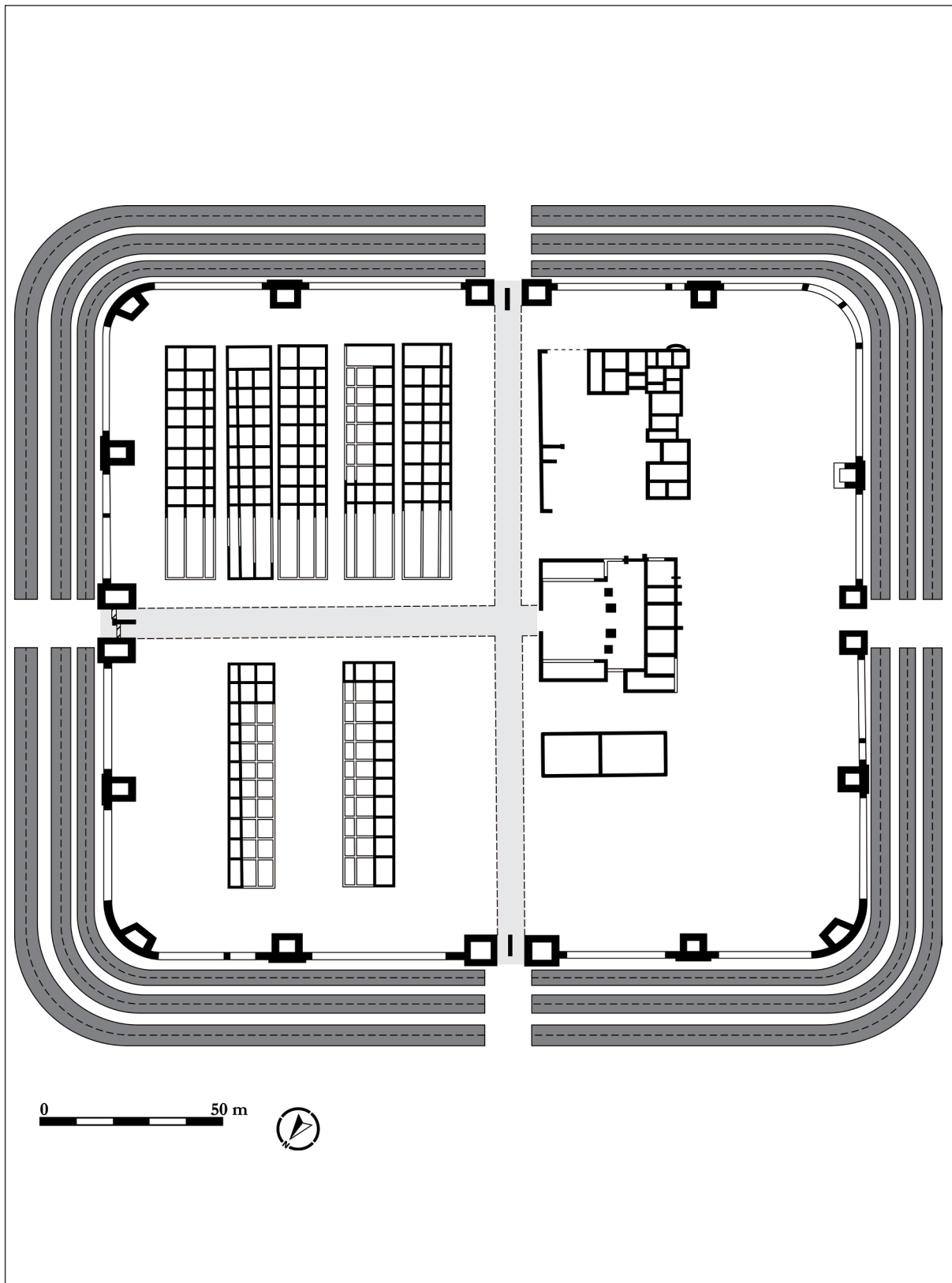


Plate XIII. Ilișua stone phase (after PROTASE ET AL. 1997, 95, pl. VII, 96, pl. VIII).

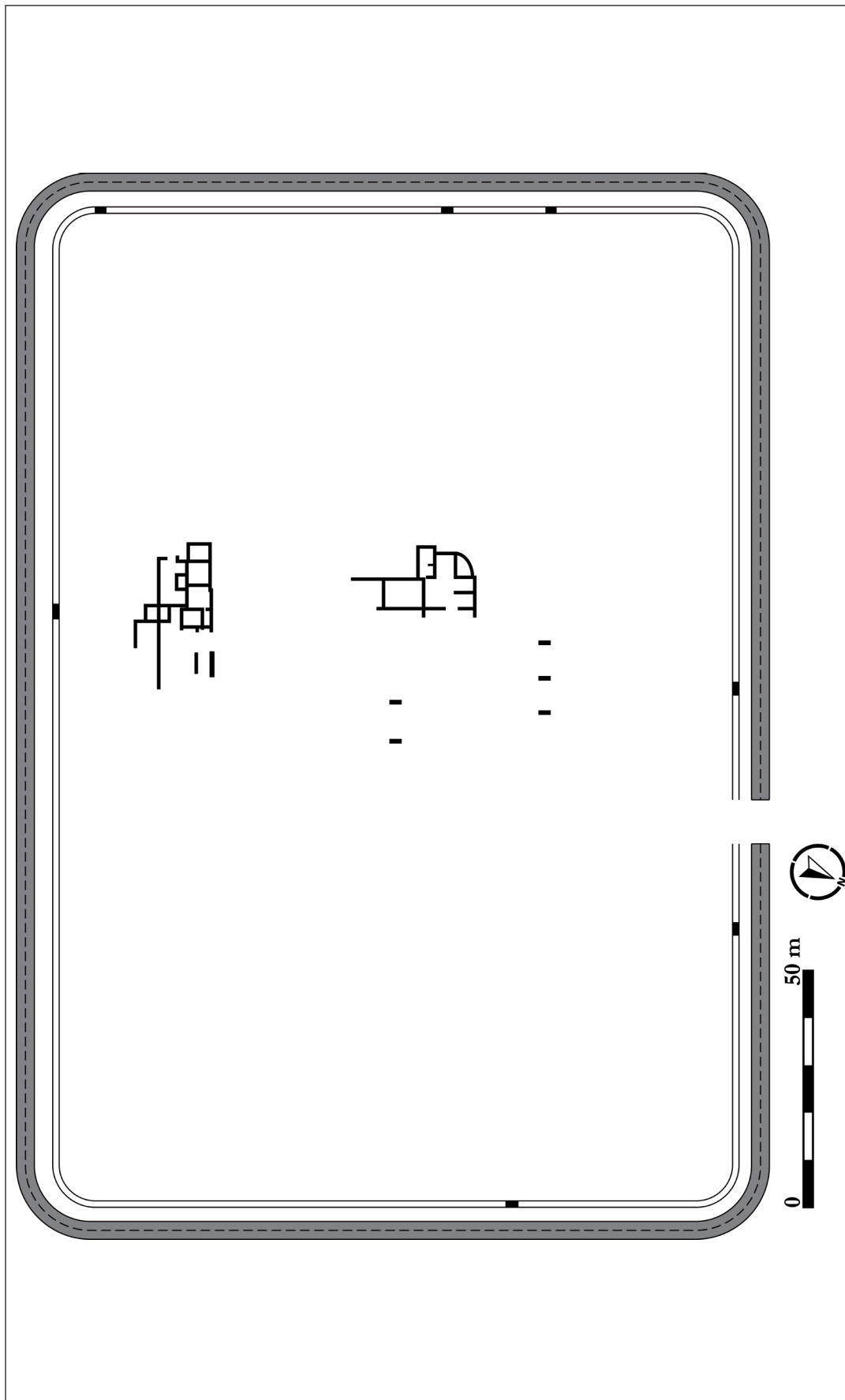


Plate XIV. Orheiul Bistriței stone phase (after PROTASE 2008, 15, Fig 3; GUDEA 1997c, 56, Nr. 31).

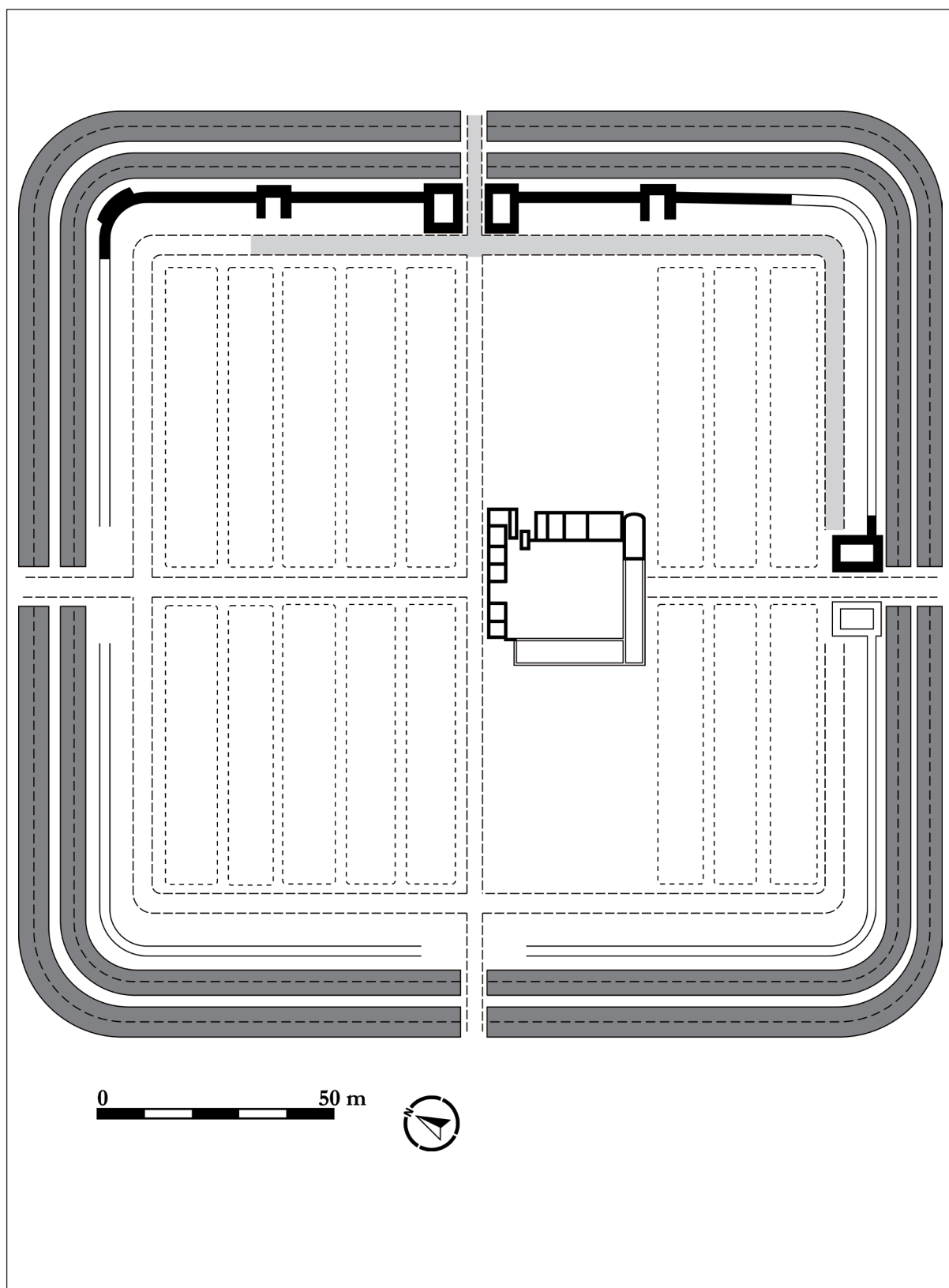


Plate XV. Gherla stone phase (after PROTASE ET AL. 2008, 406, fig. 33a).

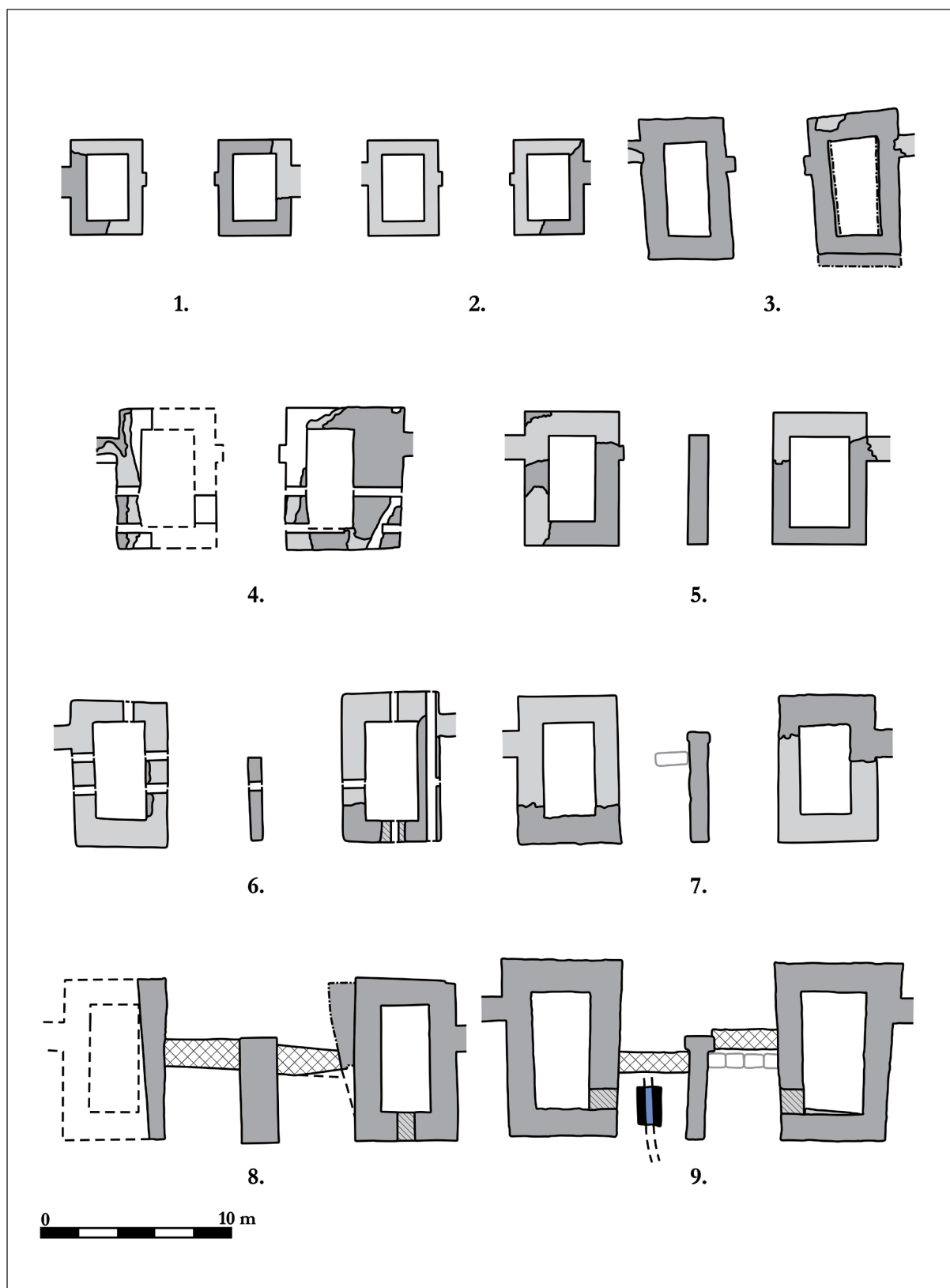


Plate XVI. Rectangular gate towers: 1. Porolissum-Citera, *porta principalis sinistra*; 2. Porolissum-Citera, *porta principalis dextra*; 3. Gilău, *porta decumana*; 4. Gilău, *porta principalis sinistra*; 5. Buciumi, *porta praetoria*; 6. Gilău, *porta principalis dextra*; 7. Ilișua, *porta principalis dextra*; 8. Romita, *porta praetoria*; 9. Ilișua, *porta praetoria*.

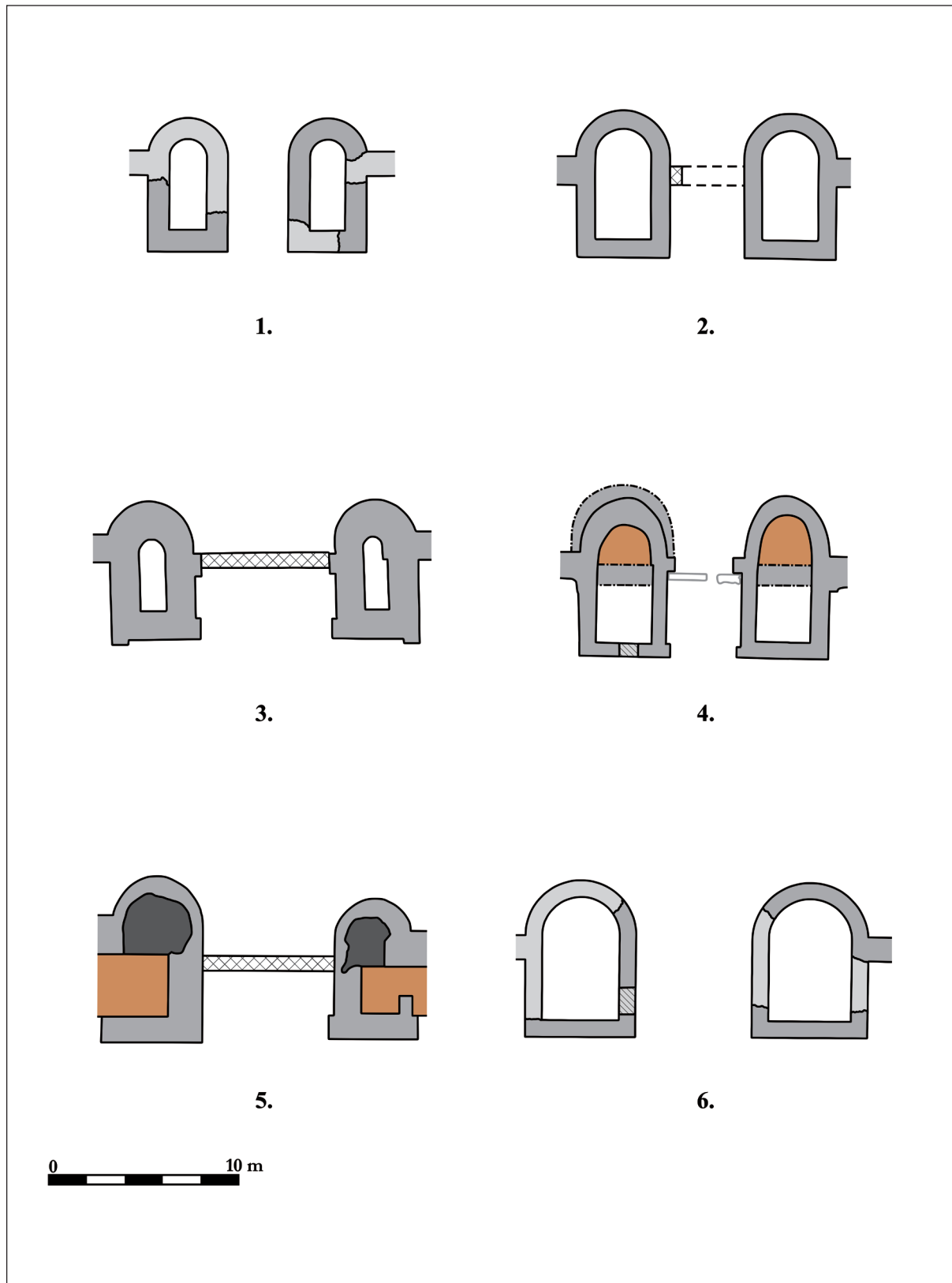


Plate XVII. Single-portalled rounded gate towers: 1. Buciumi, *porta decumana*; 2. Cășeu, *porta decumana*; 3. Bologa, *porta decumana*; 4. Porolissum-Pomăt, *porta decumana*, 5. Bologa, *porta praetoria*, 6. Buciumi, *porta principalis dextra*.

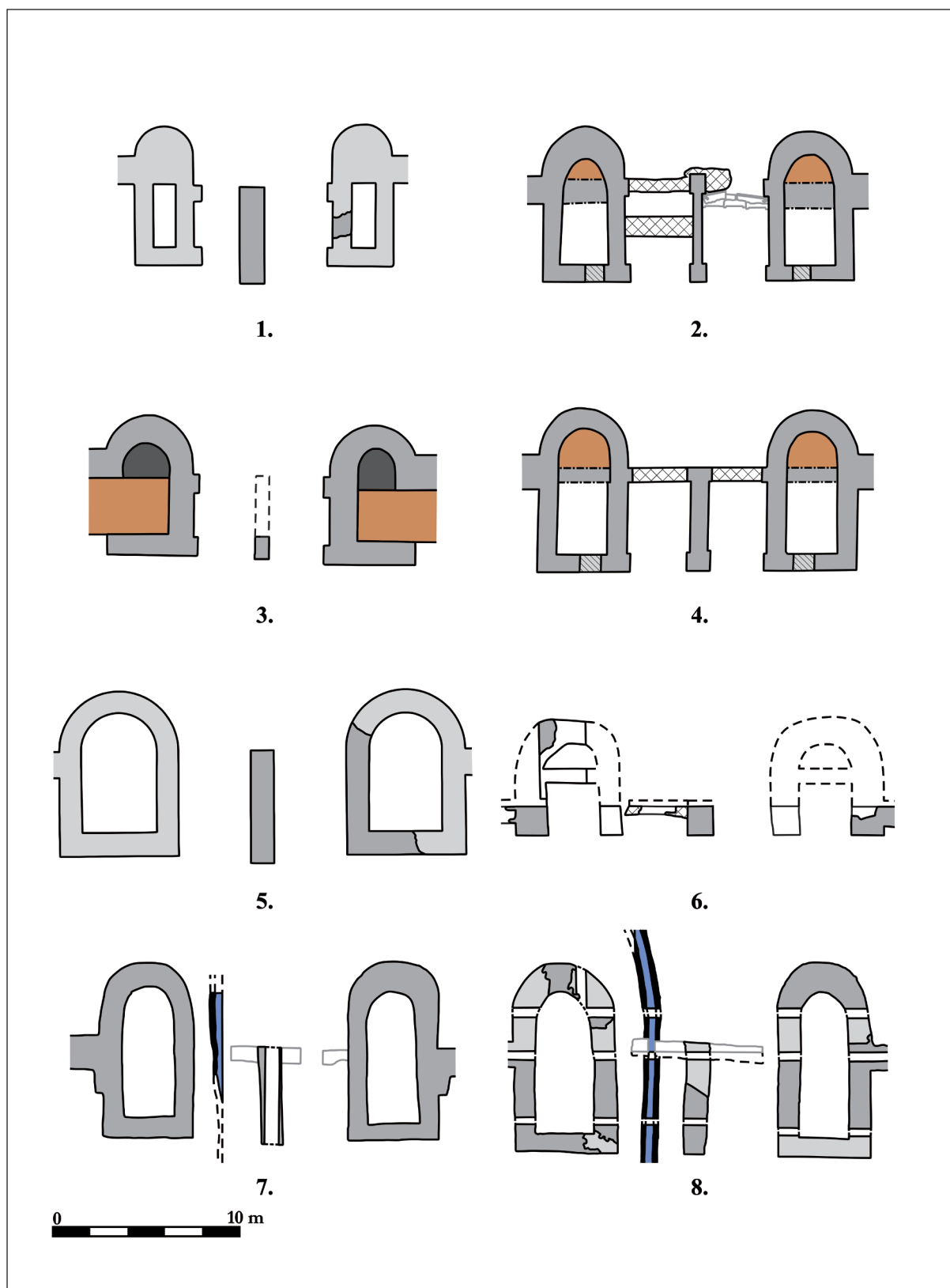


Plate XVIII. Double-portalled rounded gate towers: 1. Bologa, *porta principalis dextra*; 2. Porolissum-Pomăt, *porta principalis sinistra*; 3. Bologa, *porta principalis sinistra*; 4. Porolissum-Pomăt, *porta praetoria*; 5. Buciumi, *porta principalis sinistra*; 6. Cășeiu, *porta principalis dextra*; 7. Cășeiu, *porta principalis sinistra*; 8. Cășeiu, *porta praetoria*.

PRELIMINARY STUDY ON THE *TERRA SIGILLATA* VESSELS FROM CĂLUGĂRENI / MIKHÁZA

BERNADETT KOVÁCS*

Between 2013 and 2021 several imported terra sigillata fragments were discovered in the principia of the Roman auxiliary fort and the military vicus during excavations and field surveys at Călugăreni / Mikháza. The current study is based on a preliminary analysis of 81 fragments from 73 terra sigillata vessels, which will allow a better understanding of certain aspects of the fort's and the settlement's daily life, expand the interpretative possibilities of certain contexts and provide insight into the region's commercial network in the 2nd and 3rd centuries AD.¹

Keywords: *terra sigillata*, military site, Roman, consumption, *limes*

Cuvinte-cheie: *terra sigillata*, sit militar, roman, consum, *limes*

Despite the fact that archaeological fieldwork is constantly bringing new finds of this type to light, the research of *terra sigillata* pottery is still in its early stages in our country. This type of Roman pottery, made in a particular way and with great care, not only has aesthetic and cultural value, but can also provide very useful information in many aspects. Although research on this topic has become widespread over the years, there are still very few comprehensive and overall works on the subject (specialised publications on *terra sigillata* vessels found in *Dacia* or the eastern *limes*), especially in comparison with other countries. The importance of this approach, namely the detailed and complete processing of imported and local *terra sigillata* pottery in Roman *Dacia* is unquestionable, and the research can, of course, be carried

out step by step. The processing of the material from Călugăreni / Mikháza serves this purpose, among others. The aim of this paper is to expand our knowledge about the archaeological site of Călugăreni, by investigating the fragments of *terra sigillata*, constructing a comprehensive overview of its chronological, typological and functional particularities.²

The auxiliary fort of Călugăreni, used and inhabited by the *Cohors I Augusta Ituraeorum sagittariorum*³ auxiliary troop, which was stationed here most probably throughout the 2nd and first half of the 3rd centuries AD, is located on the territory and south-western periphery of the modern village, and its role in the Roman period was to control the border of the upper part of the Niraj-Valley and the Săcădat-Valley.⁴

Since 2013 (Fig. 1), research excavations

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² For the state of research, see: RUSU-BOLINDEȚ 2007b, 144–148; 212–218.

³ Concerning the CPAI military stamps and the unit, see mainly: PISO-MARCU 2008; SIDÓ-ÖTVÖS 2015; PÁNCZÉL 2015, 914; MATEI-POPESCU-ȚENȚEA 2016, 10; PÁNCZÉL-LUKÁCSI 2019, 417; HÖPKEN ET AL. 2020, 102.

⁴ For an overview concerning the state of research at Călugăreni, see: SZILÁGYI-PÁNCZÉL 2023.

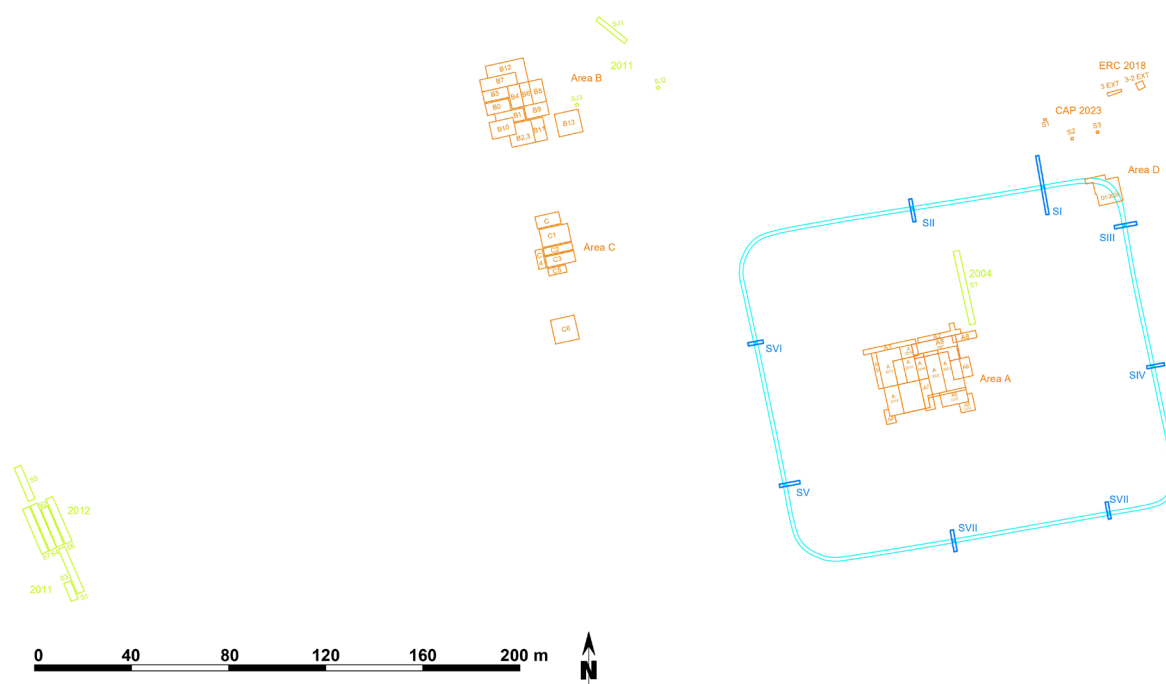


Fig. 1. The research excavations until 2023 (auxiliary fort marked with turquoise): 1961 excavations with blue; 2004, 2011–2012 excavations with green; 2013–2023 excavations with orange (Made by P. Simon and Sz. P. Pánczél).

have been carried out in the principia (Area A), during which different phases have been identified: an early wooden phase built in the early 2nd century was reconstructed following a fire damage with a stone foundation in the 3rd quarter of the 2nd century. The stone structure was most probably destroyed in the 3rd quarter of the 3rd century by fire, but the ruins were still visible on the surface in the late 19th century⁵. Based on the results of geophysical measurements, excavations started in the *thermae* (Area B) and the north-western area of the *vicus* (Area C, ERC 2018). In 2020 the north-eastern angle tower of the fort was excavated as well (Area D). In order to define the extent of the site, fieldwalking campaigns were carried out, and due to investments in the local infrastructure, rescue excavations have taken place in the area of the *vicus* (ERC, ERA, CAL, CAP). During the excavations,

traces of various craft activities were discovered and thus a detailed analysis of different aspects of human life was possible.

The present material was discovered as a result of the research excavations, field surveys and rescue excavations carried out in the period 2013–2021 on the territory of the military fort and the *vicus*. The 81 fragments belong to 73 vessels and are decorated or plain.⁶ As regards the provenance,⁷ six production centres have been identified (Fig. 2): Northern Italy, Southern Gaul (La Graufesenque), Central Gaul (Lezoux, Les Martres-de-Veyre) and Germania Superior (Rheinzabern). Three fragments are listed, whose provenance could not be identified because of their deformed, discoloured fabric or size.⁸

⁵ ORBÁN 1870, 88–89.

⁶ The decoration is sometimes invisible due to fragmentation.

⁷ This study focuses exclusively on imported wares, but there are also local ones as well.

⁸ In the text the following abbreviations have been used: Consp. = CONSPECTUS 1990; Déch. = DÉCHELETTE 1904; Drag. = DRAGENDORFF 1895; Osw. = OSWALD 1937; Munsell = MUNSELL 2010; Rog. = ROGERS 1974.

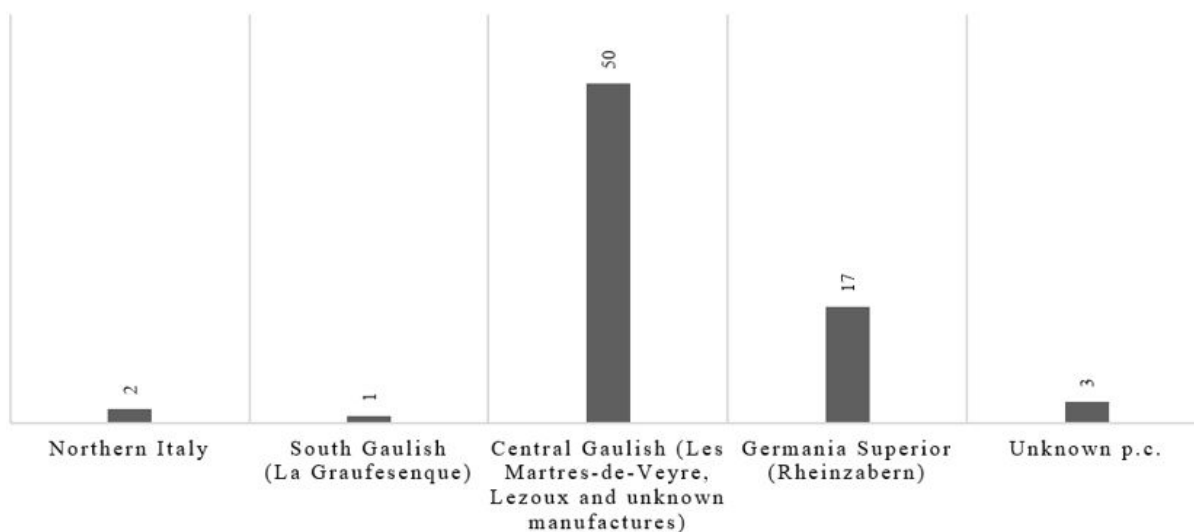


Fig. 2. Distribution of the *terra sigillata* vessels by their provenance (Northern Italy 2,3%, La Graufesenque 1,1%, Central Gaul 50,69%, Rheinzabern 17,23% and from unknown production centres 3,4%).

NORTHERN ITALY

The two pieces from Northern Italy, one from the *vicus* (Cat. 1) and one from the *principia* (Cat. 2), are quite uncommon and possibly belong to the earliest vessels. Similar examples have been unearthed in Napoca, despite the fact that they are quite early (Domitian–Trajan).⁹ While the import of Italian *sigillata* was previously considered to be a rarity, their presence (especially late Italian pieces) is traceable possibly until the Antonine period.¹⁰

Both fragments were severely discoloured and it was possible to identify the type of only one of them, the (quite common) barbotine decorated, Consp. 39/43 type dish (Cat. 1). Only a fragment of the rim has survived, but the barbotine is quite recognisable, if only for its position. This type was very common in Northern Italy,

often decorated with grape motifs or vines,¹¹ as it is observable in our case as well. It was most probably used for serving, given its size and the fine structure of its walls. The fragment has light red, fine fabric (Munsell 2.5 R, 6/6); fine calcareous clay, containing abundant limestone inclusions, with a striped appearance; light red slip (Munsell 10R, 5/6) and traces of heavy wear are visible on the surface, which is very likely why the original colour of the slip has faded. Unfortunately, we cannot reveal too much about the smaller fragment (Cat. 2) because it was found in a secondary position. The first vessel, however, was found in a possible levelling layer or destruction layer of the Roman period, which can be dated to the 3rd century AD.

SOUTHERN GAUL: LA GRAUFESENQUE

A similarly uncommon phenomenon is our only fragment of a Southern Gaulish *sigillata*,

imported from La Graufesenque (Cat. 3). In the second part of the first century AD, La

⁹ RUSU-BOLINDEȚ 2007A, 196–200.

¹⁰ RUSU-BOLINDEȚ 2004, 712–734; RUSU-BOLINDEȚ 2007A, 196–197. In the surrounding provinces, this is a much more common phenomenon, see: BJELAJAC 1990, 9–12, Pl. 2/1–2; 118, Pl. 56/55; GABLER 2001, 51–56; GABLER 2002, 64–90, Fig. 16; GABLER 2006; DIMITROVA-MILČEVA 2000, 5–9.

¹¹ GABLER 2012, 410.

Graufesenque started producing *terra sigillata* pottery also for export to other provinces.¹² Over time, especially since Vespasian (69–79 B.C.), the intensity of production increased significantly, resulting in a somewhat lower quality of the vessels.¹³ Apart from Dacia, significant quantities of *terra sigillata* were also exported to Noricum, Pannonia or Moesia – most probably until the end of Trajan's/the beginning of Hadrian's reign (approx. 120 AD).¹⁴ The fragment of the Drag. 37¹⁵ bowl (Cat. 3) is part of the

decorated image zone on the side of the vessel, and bears pearled line (Rog. A23) and leaf (Rog. U192) motifs. It's made of light pinkish-brown fabric (Munsell 10R, 6/8), with evenly distributed inclusions; glossy reddish-brown slip (Munsell 10R, 5/8), with light traces of use. Its type also offers a more specific dating possibility.¹⁶ It's very likely that this bowl was produced during the Hadrianic period (specifically between 117–120 AD).¹⁷

CENTRAL GAUL: LES-MARTRES-DE-VEYRE

At Les-Martres-De-Veyre, the production of *terra sigillata* began relatively early, around 70 AD.¹⁸ In fact, the workshop operated almost in parallel with Lezoux and other centres from Central Gaul.¹⁹ They produced very similar pottery, both in terms of type and decorative elements, and for this reason it is generally difficult to distinguish them. Les Martres-De-Veyre's export began to grow around the beginning of the 2nd century AD, especially during Trajan–Hadrian (AD 98–138).²⁰ Their decorative motifs are extremely varied and change constantly over time. We have two pieces from here (Cat. 4–5), the type of which unfortunately could not be identified. The first one (Cat. 4) has yellowish

reddish-brown fabric (Munsell 10R, 6/8), with evenly distributed inclusions, abundant traces of limestone and small, elongated voids; light orange-brown slip (Munsell 10R, 5/8) and it bears marks of surface wear. On the second fragment (Cat. 5) we can observe fragments of pearled lines (Rog. A2) and the fragment of an unidentifiable decorative motif. It has light red fabric (Munsell 10R, 6/6), with evenly distributed inclusions, abundant traces of limestone, small elongated voids and red slip (Munsell 10R, 5/8). We have been unable to identify a relevant archaeological context for any of the vessels, given that they have been recovered from modern layers in a secondary position.

CENTRAL GAUL: LEZOUX²¹

Lezoux was the most influential, famous, and active of the Central Gaulish workshops.²² In the second half of the first century AD,

terra sigillata workshops (modelled after those in Italy) were established in this area, providing employment for a large number of potters

¹² PFERDEHIRT 1978, 11–14; GABLER 2006, 63; WEBER 2013, 8.

¹³ PFERDEHIRT 1978, 14.

¹⁴ PFERDEHIRT 1978, 14; WEBER 2013, 8.

¹⁵ The bowl type Drag. 37, which was introduced to facilitate export, will also be produced in this workshop instead of the Drag. 29; GABLER 2006, 64.

¹⁶ The Drag. 37 type spread predominantly during the 2nd century AD.

¹⁷ The functionality of the more common types is discussed below.

¹⁸ BÉMONT–JACOB 1986, 146.

¹⁹ GABLER 2006, 68.

²⁰ GABLER 2006, 67.

²¹ A fragment from the officina of Paterclvs was published recently (PÁNCZÉL ET AL. 2021, 118, 139, pl. VII/3; PÁNCZÉL ET AL. 2023, 12) from the angle tower of the military fort (area D) which is not included in this paper.

²² STANFIELD–SIMPSON 1958; BÉMONT–JACOB 1986; BET ET AL. 1987.

and craftsmen. Nonetheless, the area's pottery production in Roman times is not surprising, as it is assumed that a pottery centre already existed here as early as the Iron Age.²³ Pottery workshops in other production centres, like this one, were not originally intended for export, but rather for local consumption. Their export activity increased significantly after the 2nd century AD, resulting in the emergence of a large number of new potters, many of whom no longer even marked their vessels with their stamps. The explosion of mass production was followed by the development of new export routes, including to the Danubian provinces.²⁴ In terms of quality, the pots represent a wide variety of decorations and fabrics, but they are generally larger, thicker-walled and less fragile to facilitate transport, as in the case of the Les Martres-De-Veyre products.²⁵

The material studied reflects the dominant character of the production centre.²⁶ Vessels from Lezoux constitute 58% of the material, which accounts for 42 vessels (Cat. 6–47)²⁷. The high intensity of the production centre's activities is evidenced not only by the large number of imports from here, but also by the great diversity of these products in terms of typology. We can identify several vessel types at Călugăreni, the most common and frequent being the bowl type Drag. 37 (Fig. 3).

Some of the potters and mould-makers could also be identified thanks to stylistic features of the vessels or surviving stamps (Fig. 4). In the case of *Cinnamus*, we are not explicitly referring to a master, as he was an *officinator*,²⁸ and for the dating of the fragments associated with him, we have relied on the stylistic phases of his workshop. For example, one vessel (Cat. 6) is characteristic of the

Drag. 37 (16)	Drag. 18 (1)
Drag. 29 (1)	Drag. 44 (2)
Drag. 38 (3)	Drag. 35/36 (1)
Drag. 30 (2)	Drag. 31 (1)
Drag. 18/31 (4)	Drag. 42 (1)

Fig. 3. Number of vessel types from Lezoux.

<i>Cinnamus II</i> (Cat. 6, 20, 21)
<i>Paternus II</i> (Cat. 33, 34, 44)
<i>Lastuca – Paternus V</i> (Cat. 10)
<i>Albucius II</i> (Cat. 26, 35)

Fig. 4. Workshop masters and mould-makers from Lezoux.

middle phase of his style (AD 140–160), with the *ovolo*, the sectioning of the image zones and the typical motif of pearly lines standing out.²⁹ For *Lastuca*, there is currently less information available. His stamp,³⁰ which reads backwards, appears on one fragment (Cat. 10). He probably worked as a mould-maker for *Paternus V* and used his own stamp only occasionally (which is probably why it appears so rarely). His activity dates from 160–185 AD, so our fragment could be dated to the late Antonine period.³¹

Our wares from Lezoux date from the 1st century to the end of the 2nd century AD.³² It seems that the *terra sigillata* industry had a strong development in this area at the end of Trajan's reign, establishing trade connections over wide geographical territories, but at the end of the 2nd century AD and the beginning of the 3rd century AD, the production declined and the activity of some manufactures decreased considerably, until the moment, when the appearance of the workshops of Rheinzabern led to the complete elimination of imported products from Lezoux on the Danubian markets.³³

²³ GABLER 2006, 69.

²⁴ GABLER 2006, 69–70; WEBER 2013, 10.

²⁵ GABLER 2006, 70.

²⁶ A phenomenon that can also be seen as distinctive for Dacia. In Pannonia there are more products from Rheinzabern than from the workshops of Central Gaul. For specific cases, see: GABLER 2002, 235; GABLER 2012, 409; GABLER–MRÁV 2017, 315.

²⁷ For decorative motifs, see the catalogue of the present study.

²⁸ GABLER 2006, 71.

²⁹ BULAT 1958, S. 2, 11; STANFIELD–SIMPSON 1958, Pl. 158/16, 159/23, 160/35, Pl. 158, 16; KARNITSCH 1971, Taf. 39, 137.

³⁰ HARTLEY ET AL. 2009, 20–21.

³¹ HARTLEY ET AL. 2009, 20–21.

³² For a more precise dating, see the Catalogue.

³³ GABLER 2006, 70–72.

Of the 42 vessels, only fourteen had a relevant archaeological context,³⁴ the others all being found in secondary/modern layers. They all date from the last phase of use, the 3rd century.

Walking levels, Roman pits, ditches, levelling layers, stone pavements, and destruction layers are among these suggesting that they were still in use during this period.

CENTRAL GAUL: unknown workshops

Six vessels (Cat. 48–53), have been identified as Central Gaulish, based on the characteristics of their fabric, although the workshops are not yet known. Two fragments (Cat. 48; 51) are presumed to be from Lezoux or Les Martres-de-Veyre, but without further investigation we cannot state this with sufficient certainty.

Similarly to the examples from Lezoux, they date from the 1st century to the end of the 2nd century AD.³⁵ We know the type of three of them: Drag. 45 (Cat. 49), Drag. 35/36 (Cat. 50) and Drag. 30 (Cat. 52). Regarding their archaeological context, they were all found in a secondary position.

GERMANIA SUPERIOR: RHEINZABERN

The manufacture from Rheinzabern, the largest in size, developed at the time of the decline of exports from the production centres of Central Gaul at the end of the 2nd century AD. One of the area's advantages is its favourable geographical location in Germania Superior.³⁶ In terms of the material analysed, it represents 17.23% of the total number of vessels that can be identified by provenance. This percentage corresponds to a total of 17 vessels (Cat. 54–70), which show a diversity in terms of typology and decoration. Seven different vessel types have

been identified: Drag. 37 (Cat. 55–57; 61), Drag. 31 (Cat. 62–65; 70), Drag. 30 (Cat. 59), Drag. 18/31 (Cat. 54), Déch. 72 (Cat. 66) and Drag. 32 (Cat. 69). For now, two masters can be identified by their stamps: *Reginus XI*³⁷ and *Cerialis V*.³⁸

In the absence of additional information, the majority of the vessels could be dated to the heyday of the manufactory's export activity (AD 160–230).³⁹ Seven of these pieces have been recovered from a Roman context, all of which date from the 3rd century AD and are from the last phase of use.⁴⁰

UNIDENTIFIABLE FRAGMENTS

Due to their size and fracture, three fragments were impossible to classify as to their origin or type. Two of these (Cat. 71–72) were discovered in the *vicus*, and one (Cat. 73) in the

principia. Based on the context of the first two (Cat. 71–72), we can at least estimate that they were still in use in the 3rd century AD, but the exact time and purpose are unknown.

³⁴ Cat. 8–10; 13–14; 16; 20; 24; 27; 33; 35; 37–38; 46.

³⁵ According to the latest research and interpretations, in the case of the Central Gaulish workshops, in general, the end of their export period to the provinces can be estimated at around 180–185 AD (FABER 1994, 184; GABLER 2002, 230).

³⁶ GABLER 2006, 74; WEBER 2013, 14.

³⁷ HARTLEY ET AL. 2011, 361.

³⁸ HARTLEY ET AL. 2008, 353.

³⁹ The workshop operated until the second half of the 3rd century AD, when external and internal crisis led to its final decline. However, it has been recorded that some plain *sigillata* vessels were still being produced in the 4th century AD (GABLER 2006, 80–81; WEBER 2013, 15). For a more precise dating, see the Catalogue.

⁴⁰ Cat. 54; 61; 63–66; 68.

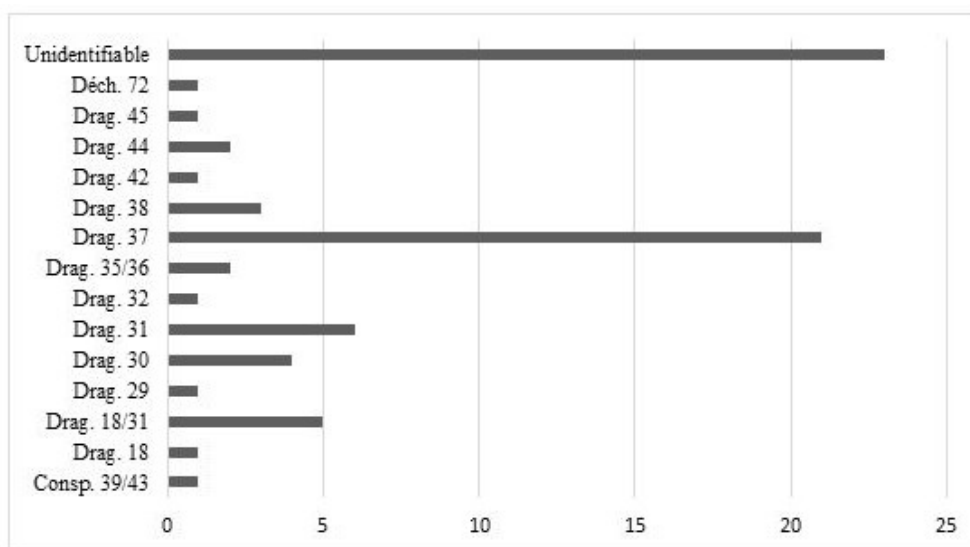


Fig. 5. Distribution of the terra sigillata vessels based on typology.

THE FUNCTION OF THE VESSELS

The types can also give insight into the life of the Romans who lived in Călugăreni and may explain the function of the vessels. We can also note the presence of human fingerprints (Cat. 22; 54; 49) which is an interesting phenomenon and can be investigated.

We can find almost the entire range of tableware at Călugăreni: bowls, jugs, and cups, both for preparing and serving food and for eating (Fig. 5). We can confirm that the Drag. 37 type bowls are very well represented on the site and constitute the largest group.⁴¹ Some researchers claim that bowls of this type can be considered *panna*, from which beer or wine was presumably consumed,⁴² a function indicated by the frequent decorative motifs in the form of grape leaves.⁴³ Another point of view emphasises their use as mixing bowls, but this can only be considered in a few cases if the diameter of these

vessels is taken into account.⁴⁴ In the case of our set, these diameters range from 8 to 29 cm. We can't rule out the first theory, though, because the smaller pots (8–22 cm) could have been used as drinking vessels while the larger ones (22–29 cm) for mixing. In this regard, the largest vessel (Cat. 7), for example, might easily have been used in this manner, given not only its great diameter (29 cm), but also the traces of wear and the colour of the fragment, both of which point to more intensive use.

The Consp. 39/43 type (Cat. 1) bowls were most likely used for serving.⁴⁵

The Drag. 18 (Cat. 24) was manufactured before the Drag. 18/31, although it most likely had the same purpose: serving.⁴⁶ The Drag. 18/31 type was later designed to enable the serving of more liquid meals, as its walls are higher and thus the vessel is rounder. The Drag. 18 is,

⁴¹ Cat. 3; 6–9; 17; 19–22; 26; 28; 32–35; 44; 55–57; 61. Their dominance is unsurprising given that this is the primary form on which relief decorations appear, which was most common during the 2nd century AD. This phenomenon could be attributed, among other things, to the fact that new forts were built along the *limes* during this time span, and the number of troops increased significantly, requiring the development of a form that was easier to shape, transport, and suitable for mass production (GABLER 2006, 66).

⁴² HOFFMANN 1988; MARICHAL 1988; BIRD 2008.

⁴³ A dedication for beer also occurs on a bowl of this type (HOFFMANN 1988, pl. 50–56).

⁴⁴ BIRD 2008, 135.

⁴⁵ For more details, see the chapter concerning the Northern Italian fragments, above.

⁴⁶ DANNELL 2018, 4.

on the other hand, flatter and simpler. Our dish has a diameter of 24 cm, which could suggest that it was used for serving or eating. Drag. 18/31 vessels are rarely decorated, and their use may have been similar to Drag. 31 plates (*catini*). They have an average diameter of 18 cm, which could justify the previously mentioned function.⁴⁷

The bowl Drag. 29 (Cat. 10) is a decorated form, like Drag. 30 and 37, and it's most likely a *panna*.

Drag. 30 bowls (Cat. 52; 59) were probably used for drinking and mixing (*panna*) alongside Drag. 37.⁴⁸ The average diameter of the bowls studied is small (16–21 cm), suggesting that they were drinking vessels.

Drag. 31 bowls belong to the *catini* category, and were used as serving bowls on the table. In this sense, the term 'plate' would be correct, but they are not equivalent to modern plates, as we are unaware of any Roman dishes without a raised wall.⁴⁹ Drag. 31 bowls from Călugăreni⁵⁰ have a diameter of 16–26 cm, which indicates their purpose. There are two possibilities in this case: the larger ones (21–26 cm) were most likely used merely for serving and the smaller ones (smaller than 16 cm) were used for consumption.⁵¹

The less common cup types Drag. 35/36 are known in the sources as *catini*.⁵² Their (Cat. 38; 50) size suggests that they were once used to serve meals.⁵³ *Catilibol*,⁵⁴ another name for this type, caused some confusion in the literature

because the term is derived from the word "mushroom," so it was assumed that it was only used to serve mushrooms. However, this type of bowl was most certainly used to serve more than one sort of food, with the name possibly referring to the fact that the bowl is shaped like the vegetable in question when turned upside down.⁵⁵

Drag. 38 bowls are common serving dishes, as indicated by the prominent 'wings' that allow the food to be transported easily.⁵⁶ Their tiny diameter (16 cm), on the other hand, suggests a use for serving, rather than cooking or preserving food.⁵⁷

The Drag. 42 bowl (Cat. 45) is a small (14 cm in diameter) *catinus*, whose function is indicated by traces of a barbotine decoration and it was most likely part of the tableware.⁵⁸

We can conclude that the *paropsis*⁵⁹ type Drag. 44 is widespread in the province of Dacia,⁶⁰ it is undecorated, and usually has a large diameter (around 21–30 cm).⁶¹ Since our fragments (Cat. 25, 42) are smaller, they belong to the least common types. The type is typically plain, and it's usually used to serve sauces, vegetables, or small amounts of food.⁶²

The Drag. 45 *mortarium* is notable for its thick walls and large dimensions. It could have been a smaller bowl with a diameter of 16 cm in our case (Cat. 45). The type could also be identified by its base fragment due to its distinct shape. Lion-head apertures are commonly used

⁴⁷ Cat. 23; 29; 36; 39; 54.

⁴⁸ DANNELL 2018, 3.

⁴⁹ DALBY 2003, 101.

⁵⁰ Cat. 46; 62–65; 70.

⁵¹ HILGERS 1969, 142.

⁵² HILGERS 1969, 140–142.

⁵³ GROCOCK–GRAINGER 2006, 334.

⁵⁴ MARICHAL 1988, 84.

⁵⁵ HILGERS 1969, 121; GROCOCK–GRAINGER 2006, 334; DANNELL 2018, 3.

⁵⁶ DANNELL 2018, 4.

⁵⁷ Cat. 11; 40–41.

⁵⁸ RUSU-BOLINDEȚ 2007b, 205.

⁵⁹ RUSU-BOLINDEȚ 2007b, 205.

⁶⁰ For analogies, see: GUDEA 1989, 261, Pl. LXVI–LXVI A; GUDEA 1996, 54, Pl. XXIX; MATEI–BAJUSZ 1997, 122–123, Pl. XLIX/3–4; L/2–5; LV/3–5.

⁶¹ RUSU-BOLINDEȚ 2007b, 206.

⁶² HILGERS 1969, 238–239.

beneath the rims of bowls of this type.⁶³ This dish was probably used to prepare food.

Based on preliminary research, we can conclude that the import of *terra sigillata* vessels peaked in the second half of the 2nd century AD, with the majority of wares coming from Central Gaul (mainly from Lezoux). Early vessels, possibly made in the first century AD, are also noteworthy. These are quite significant, especially the Consp. 39/43 vessel from Northern Italy (Cat. 1) and the Drag. 18 plate (Cat. 24), which could indicate an early construction of the auxiliary fort and the beginnings of commercial relations as early as Trajan's time (right after the time of the conquest and the establishment of the province). It's also possible that

these early products were brought to Dacia by the soldiers rather than imported, implying that this happened later, but we must also consider other phenomena. We have vessels in the material that we can't rule out as having been made in the 1st century AD. Although a date in the 2nd century AD appears more reasonable in some cases, this cannot be stated with sufficient certainty without further research. The archaeological contexts help us fill in the gaps, but we should note, that the majority of them date from the post-Roman or modern period, and many of the fragments were discovered in secondary positions. However, their study was relevant because it attested that the use of *terra sigillata* pottery was still common in the 3rd century AD.

⁶³ LUDOWICI 1912, 159, FIG. 56, 57.

CATALOGUE⁶⁴**Northern Italy**

1. Rim fragment of a Consp. 39/43 bowl with barbotine decoration.

Traces of heavy wear are visible on the surface, which is very likely why the original colour of the slip has faded; d=10 cm; w=1.7 cm; th=0.5 cm. (Pl. I/1, Pl. II/1)

Ware from Northern Italy, unknown workshop. AD 81–117 (Domitian-Trajan)

Context-specific dating: the fragment was found in a layer of mixed yellowish clay, probably a levelling layer, over a level of destruction: 3rd c. AD. Findspot: *vicus* (ERC 2018, AV/78 CM 10–11, cx. 431, sf. 593) Mureş County Museum, inv.: 8958.

2. Wall sherd. Type unidentifiable due to the high degree of fragmentation, undecorated; w=1.3 cm; th=0.3 cm. (Pl. I/2)

Ware from Northern Italy, unknown workshop. AD 81–117 (Domitian-Trajan)

Findspot: *principia* (CAL 2019, A, cx. 593, sf. 11887) Mureş County Museum, inv.: 8933.

South Gaul: La Graufesenque

3. Wall sherd of a Drag. 37 bowl, decorated with pearly lines (Rog. A23) and leaf motifs (Rog. U192); d=26 cm; w=3.7 cm; th=0.8 cm. (Pl. I/3; Pl. II/3)

Ware from La Graufesenque.

AD 117–120 (Hadrian)

Published: DOBOS et al. 2017, 149, Abb. 5; HÖPKEN et al. 2020, 106, Abb. 6;

Findspot: *vicus* (ERC 2018, AIII/80 cm 9–10, cx. 297, sf. 500) Mureş County Museum, inv.: 8983.

Central Gaul: Les Martres-de-Veyre

4. Footring fragment. Type unidentifiable due to the high degree of fragmentation, undecorated; d=8 cm; w=1.2 cm; th=0.6 cm. (Pl. I/4)

Ware from Les Martres-de-Veyre.

AD 117–192 (Hadrian-Commodus)

Findspot: *vicus* (CAL 2019, C6, cx. 2136, sf. 6179)

Mureş County Museum, inv.: 8936.

5. Wall sherd. Type unidentifiable due to the high degree of fragmentation. Decorated with pearly line (Rog. A2) and fragment of unidentifiable motif (?); w=2.5 cm; th=0.7 cm. (Pl. I/5)

Ware from Les Martres-de-Veyre.

AD 117–192 (Hadrian-Commodus)

Findspot: *vicus* (ERC 2018, AIII/80 CM 13–14, cx. 117, sf. 220) Mureş County Museum, inv.: 8986.

Central Gaul: Lezoux

6. Rim and wall fragment of a Drag. 37 bowl, decorated with *ovolo* (Rog. B85), pearly lines (Rog. A2), decorative motif depicting Vulcan (Déch. 39), decorative motif depicting a deer (Déch. 847), semi-circular motif (Rog. F7), medallion (Rog. E21); d=16 cm; w=6.9 cm; th=1.2 cm. (Pl. I/6; Pl. II/6)

Ware from Lezoux, workshop of Cinnamus II.

AD 140–160 (Antoninus-Pius)

Findspot: *vicus* (CAL 2015, C4, cx. 2095, sf. 5552) Mureş County Museum, inv.: 8922.

7. Rim fragment of a Drag. 37 bowl, undecorated; d=29 cm; w=2.4 cm; th=0.55 cm. (Pl. I/7; Pl. II/7)

Ware from Lezoux.

AD 70 – end of 2nd c. AD (start of production of the Drag. 37 – end of production in Lezoux)

Findspot: *vicus* (CAL 2015, C4, cx. 2093, sf. 5557)

Mureş County Museum, inv.: 8991.

8. Rim fragment of a Drag. 37 bowl, undecorated; d=18 cm; w=2.8 cm; th=0.5 cm. (Pl. I/8)

Ware from Lezoux.

AD 70 – end of 2nd c. AD (start of production of the Drag. 37 – end of production in Lezoux)

⁶⁴ In the catalogue the following abbreviations have been used cx. = context; d = diameter; w = width; th = thickness; sf. = small find number; inv. = inventory number.

Context-specific dating: possible walking level in the *vicus*, 3rd c. AD.

Findspot: *vicus* (CAL 2019, C6, cx. 2132, sf. 6331)

Mureş County Museum, inv.: 8990/2.

9. Base fragment of a Drag. 37 bowl, decorated with part of an unidentifiable double medalion; cannellure, following the line of the body and enclosing the metopes; d=6 cm; w=2.5 cm; th=0.8 cm. (Pl. I/9; Pl. II/9)

Ware from Lezoux.

AD 70 – end of 2nd c. AD (start of production of the Drag. 37 – end of production in Lezoux)

Context-specific dating: levelling level in the *vicus*, 3rd c. AD.

Findspot: *vicus* (ERC 2018, AIII/80 CM 4–5, cx. 92, sf. 174) Mureş County Museum, inv.: 8985.

10. Base fragments (2) of a Drag. 29 bowl, bearing the stamp [LA]STVCA·F(ecit)← (*Lastuca*) decorated with pearled line (Rog. A3) above the footring and between the metopes); d=7 cm; w=1.9 cm; th=0.7 cm. (Pl. I/10; Pl. II/10)

Ware from Lezoux, workshop of *Paternus* (style V). AD 160–185 (Antoninus-Pius–Commodus) – Dating based on the period of activity of *Lastuca*, mould-maker for *Paternus V*.

Context-specific dating: One of the fragments found in a possible walking level in the *vicus*, 3rd c. AD, the other fragment found in topsoil (secondary position).

Findspot: *vicus* (CAL 2019, C6, cx. 2132, cx. 2137, sf. 6324, 6276) Mureş County Museum, inv.: 8925, 8949.

11. Base fragment of a Drag. 38 bowl, undecorated; d=8 cm; w=1.5 cm; th=0.7 cm. (Pl. I/11; Pl. II/11)

Ware from Lezoux.

AD 140 – end of 2nd c. AD (start of production of the Drag. 38 – end of production in Lezoux)

Findspot: *vicus* (CAL 2019, C6, cx. 2136, sf. 6240) Mureş County Museum, inv.: 8948.

12. Wall sherd. Type unidentifiable due to the high degree of fragmentation; decorated with an unidentifiable leaf motif (?); d=16 cm; w=2.4 cm; th=0.7 cm. (Pl. I/12;)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Findspot: *vicus* (CAL 2019, C6, cx. 2132, sf. 6339)

Mureş County Museum, inv.: 8943.

13. Wall sherd. Type unidentifiable due to the high degree of fragmentation; undecorated; w=2.9 cm; th=3 cm. (Pl. I/13)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Context-specific dating: Fragment found in the fill of a Roman pit, 3rd c. AD.

Findspot: *vicus* (CAL 2019, C6, cx. 2142, sf. 6257)

Mureş County Museum, inv.: 8937.

14. Rim fragment. Type unidentifiable due to the high degree of fragmentation; undecorated; d=12 cm; w=1.1 cm; th=0.4 cm. (Pl. I/14)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Context-specific dating: Fragment found in the fill of a ditch from Roman period, 3rd c. AD.

Findspot: *vicus* (CAL 2014, C2, cx. 2077, sf. 5006)

Mureş County Museum, inv.: 8994.

15. Rim fragment. Type unidentifiable due to the high degree of fragmentation; undecorated; d=14 cm; w=0.9 cm; th=0.3 cm. (Pl. I/15)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Findspot: *vicus* (CAL 2014, C1, cx. 2034, sf. 5021C)

Mureş County Museum, inv.: 8998.

16. Wall sherd. Type unidentifiable due to the high degree of fragmentation; decorated with an unidentifiable vegetal motif (?); d=24 cm; w=3.4 cm; th=0.7 cm. (Pl. I/16)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Context-specific dating: Fragment found in Roman walking level, paved with pebbles, 3rd c. AD.

Findspot: *vicus* (CAL 2014, C1, cx. 2051, sf. 4550)

Mureş County Museum, inv.: 16110.

17. Rim fragment of a Drag. 37 bowl, decorated with *ovolo* (Rog. B176), pearled line (Rog. A2) and probably a fragment of a medallion or semi-circular motif (?); d=16 cm; w: 9.1 cm; g: 0.9 cm. (Pl. I/17; Pl. II/17)

Ware from Lezoux.

AD 70 – end of 2nd c. AD (start of production of the Drag. 37 – end of production in Lezoux)

Findspot: *vicus* (CAL 2018, *passim*)

Mureş County Museum, inv.: 17247.

18. Wall sherd of a Drag. 30 bowl, decorated with pearled lines (Rog. A2); medallion (Rog. F59); rabbit motif (Déch. 950); d=21 cm; w: 2.6 cm; g: 0.6 cm. (Pl. I/18; Pl. II/18)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Findspot: *vicus* (CAL 2015, C3, cx. 2095, sf. 5376)

Mureş County Museum, inv.: 16114.

19. Wall sherd of a Drag. 37 bowl, decorated with pearled lines (Rog. A3); medallion (Osw. 918); woman motif (STANFIELD–SIMPSON 1958, Pl. 154, 16), anthropomorphic decorative motif (STANFIELD–SIMPSON 1958, Pl. 154, 19); d=16 cm; w: 3.9 cm; g: 0.7 cm. (Pl. I/19; Pl. II/19)

Ware from Lezoux.

AD 70 – end of 2nd c. AD (start of production of the Drag. 37 – end of production in Lezoux)

Context-specific dating: Possible rubbish pit from the Roman period, 3rd c. AD.

Findspot: *vicus* (ERC 2018, AIII/80 CM 3–2 ext., cx. 2007, sf. 10134) Mureş County Museum, inv.: 17994.

20. Wall sherd of a Drag. 37 bowl, decorated with *ovolo* (Rog. B182); d=22 cm; w: 3 cm; g: 0.7 cm. (Pl. I/20; Pl. II/20)

Ware from Lezoux, workshop of Cinnamus (style II).

AD 135–180 (Hadrian–Marcus Aurelius)

Context-specific dating: the fragment was found in a levelling layer between the wooden and stone phases of the *basilica*, probably dated to the late 2nd and early 3rd c. AD.

Findspot: *principia* (CAL 2015, A, cx. 183, sf. 10345)

Mureş County Museum, inv.: 8931.

21. Wall sherd of a Drag. 37 bowl, decorated with pearled lines (Rog. A2), *ovolo* (Rog. B17), column motif (Rog. P62) with volutes (Rog. G350) and closing motif (Rog. R70). The metopes are closed only at the top and sides, but remain open at the bottom of the vessel. In the left-hand field a gnome (pygmy) armed with a spear can be seen (Déch. 439), a copy of which appears (fragmentary) in the lower right-hand corner, where half of the relief field is preserved; on the right a decorative motif depicting a dog in a running position can be distinguished, partially preserved (Déch. 910); d=8 cm; w=6.1 cm; th=1.2 cm. (Pl. I/21; Pl. II/21)

Ware from Lezoux, workshop of Cinnamus (?).

1st c. AD – end of 2nd c. AD

Findspot: *vicus* (ERC 2019, AIV/77 CM 45–79, cx. 694, sf. 700) Mureş County Museum, inv.: 8945.

22. Rim fragment of a Drag. 37 bowl; undecorated; d=22 cm; w=4.3 cm; th=0.7 cm. (Pl. I/22; Pl. II/22)

Ware from Lezoux.

AD 70 – end of 2nd c. AD (start of production of the Drag. 37 – end of production in Lezoux)

Findspot: *vicus* (CAL 2014, C2, cx. 2039, sf. 4150)

Mureş County Museum, inv.: 8993.

23. Rim fragment of a Drag. 18/31 plate; undecorated; d=18 cm; w=3.8 cm; th=0.6 cm. (Pl. I/23; Pl. II/23)

Ware from Lezoux.

AD 117–150 (Hadrian–Early Antonine Period)

Findspot: *vicus* (ERC 2018, AIII/80 CM, 9–10, cx. 297, sf. 501) Mureş County Museum, inv.: 8959.

24. Rim fragment of a Drag. 18 plate; undecorated; d=24 cm; w=0.5 cm; th=0.6 cm. (Pl. I/24; Pl. II/24)

Ware from Lezoux.

AD 70–100 (start of production in Lezoux – cca. end of production of type Drag. 18)

Context-specific dating: Fragment found in a

possible walking level of the Roman period, 3rd c. AD.

Findspot: *vicus* (CAL 2019, C6, cx. 2137, sf. 6240)

Mureş County Museum, inv.: 8990/1.

25. Base fragment of a Drag. 44 bowl; undecorated; d=8 cm (base); w=2.4 cm; th=0.8 cm. (Pl. I/25a-b; Pl. II/25)

Ware from Lezoux.

AD 140–180

Findspot: *vicus* (CAL 2014, fieldwalking, grid no. 700/1975 R4, sf. F1063)

Mureş County Museum, inv.: 17995.

26. Rim fragment of a Drag. 37 bowl, decorated with *ovolo* (Rog. B134), pearled lines (Rog. A13) and a cannelure. (Pl. I/26; Pl. II/26)

Ware from Lezoux, workshop of Albucius II.

AD 145–180 (Antonine period)

Findspot: *vicus* (CAL 2016, C3, cx. 2121, sf. 5863)

Mureş County Museum, inv.: 8941.

27. Wall sherd. Type unidentifiable due to the high degree of fragmentation, undecorated; w=1.8 cm; th=0.4 cm. (Pl. I/27)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Context-specific dating: Fragment found in a possible walking level of the Roman period, 3rd c. AD.

Findspot: *vicus* (CAL 2014, C1, cx. 2035, sf. 4421)

Mureş County Museum, inv.: 16111.

28. Rim fragment of a Drag. 37 bowl; undecorated; d=18 cm; w=2.8 cm; th=0.5 cm. (Pl. I/28; Pl. II/28)

Ware from Lezoux.

AD 70 – end of 2nd c. AD (start of production of the Drag. 37 – end of production in Lezoux)

Findspot: *vicus* (CAL 2015, C3, cx. 2095, sf. 5552)

Mureş County Museum, inv.: 8992.

29. Wall sherd of a Drag. 18/31 plate; undecorated; d=20 cm; w=3.8 cm; th=0.7 cm. (Pl. I/29; Pl. II/29)

Ware from Lezoux.

AD 140–185 (Hadrian–Early Antonine Period)

Findspot: *vicus* (CAL 2019, fieldwalking VN W7 04, sf. 6283)

Mureş County Museum, inv.: 8934/1.

30. Wall sherd. Type unidentifiable due to the high degree of fragmentation, undecorated; w=3.3 cm; th=0.5 cm. (Pl. I/30)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Findspot: *vicus* (CAL 2014, fieldwalking, grid no. 875/1875 R4, sf. F1041) Mureş County Museum, inv.: 17245.

31. Wall sherd. Type unidentifiable due to the high degree of fragmentation, undecorated; w=1.7 cm; th=0.2 cm. (Pl. I/31)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Findspot: *vicus* (CAL 2013, C, cx. 2002, sf. 2172) Mureş County Museum, inv.: 8957.

32. Rim fragment of a Drag. 37 bowl; undecorated; d=16 cm; w=3.1 cm; th=0.6 cm. (Pl. I/32)

Ware from Lezoux.

AD 70 – end of 2nd c. AD (start of production of the Drag. 37 – end of production in Lezoux)

Findspot: *vicus* (CAL 2019, fieldwalking VN W7 03, sf. 6285) Mureş County Museum, inv.: 8924.

33. Wall sherd of a Drag. 37 bowl, decorated with *ovolo* (Rog. B171); d=24 cm; w=7 cm; th=0.7 cm. (Pl. I/33; Pl. II/33)

Ware from Lezoux, workshop of Paternus II.

AD 70–100

Context-specific dating: Possible fill of a ditch from Roman period, 3rd c. AD.

Findspot: *vicus* (CAL 2013, C, cx. 2007, sf. 2539)

Mureş County Museum, inv.: 8952.

34. Wall sherd of a Drag. 37 bowl, decorated with *ovolo* (Rog. B106), pearled lines (Rog. A2); d=16 cm; w=4.7 cm; th=0.6 cm. (Pl. I/34; Pl. II/34)

Ware from Lezoux, workshop of Paternus II.

AD 70–100

Findspot: *vicus* (CAL 2014, C1, cx. 2034, sf. 2747)

Mureş County Museum, inv.: 8996.

35. Wall sherd of a Drag. 37 bowl, decorated with *ovolo* (Rog. B204); d=16 cm; w=3.8 cm; th=0.7 cm. (Pl. I/35; Pl. II/35)

Ware from Lezoux, workshop of Albucius II.
AD 145–180 (Antonine period)

Context-specific dating: Fragment found in a stone paving connected to the last construction phase of the *vicus*, 3rd c. AD.

Findspot: *vicus* (CAL 2016, C3, cx. 2085, sf. 5602)

Mureş County Museum, inv.: 8926.

36. Rim fragment of a Drag. 18/31 plate; undecorated; d=16 cm; w=2.4 cm; th=0.7 cm. (Pl. I/36; Pl. II/36)

Ware from Lezoux.

AD 140–185 (Hadrian–Early Antonine Period)

Findspot: *vicus* (CAL 2016, C3, cx. 2121, sf. 5821)

Mureş County Museum, inv.: 8929.

37. Rim fragment of a Drag. 30 bowl; undecorated; d=20 cm; w=4.7 cm; th=0.75 cm. (Pl. I/37; Pl. II/37)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Context-specific dating: Destruction layer of a wooden structure from the Roman period, 3rd c. AD.

Findspot: *vicus* (CAL 2013, C, cx. 2018, sf. 2691)

Mureş County Museum, inv.: 8956.

38. Rim fragment of a Drag. 35/36 cup; undecorated; d=18 cm; w=0.8 cm; th=0.5 cm. (Pl. I/38; Pl. II/38)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Context-specific dating: Fragment found in possible walking level in the *vicus*, 3rd c. AD.

Findspot: *vicus* (CAL 2019, C6, cx. 2135=2137, sf. 6226) Mureş County Museum, inv.: 8942.

39. Wall sherd of a Drag. 18/31 plate, decorated with pearly lines (Rog. A2) and a motif representing Apollo (Déch. 52); d=16 cm; w=2.4 cm; th=0.7 cm. (Pl. I/39; Pl. II/39)

Ware from Lezoux.

AD 140–185 (Hadrian–Early Antonine Period)
Findspot: *vicus* (CAL 2019, fieldwalking VN W7 04, sf. 6783) Mureş County Museum, inv.: 8934/2.

40. Rim fragment of a Drag. 38 bowl, undecorated, d=16 cm; w=2.2 cm; th=0.7 cm. (Pl. I/40; Pl. II/40)

Ware from Lezoux.

AD 140 – end of 2nd c. AD (start of production of the Drag. 38 – end of production in Lezoux)

Findspot: *vicus* (CAL 2019, C6, cx. 2136, sf. 6208)

Mureş County Museum, inv.: 8935.

41. Wall sherds (2) of a Drag. 38 bowl, undecorated, d=20 cm; w=4.3 cm; th=0.6 cm. (Pl. I/41a–b; Pl. III/41)

Ware from Lezoux.

AD 140 – end of 2nd c. AD (start of production of the Drag. 38 – end of production in Lezoux)

Findspot: *vicus* (CAL 2014, C1, cx. 2034, sf. 4289)

Mureş County Museum, inv.: 16117.

42. Wall sherd of a Drag. 44 bowl; undecorated; d=14 cm; w=1.8 cm; th=0.7 cm. (Pl. I/42; Pl. III/42)

Ware from Lezoux.

AD 140–180

Findspot: *vicus* (ERC 2018, AIII/80 CM 12–13, cx. 175, sf. 503) Mureş County Museum, inv.: 8988.

43. Wall sherd. Type unidentifiable due to the high degree of fragmentation. Undecorated; d=22 cm; w=1.6 cm; th=0.9 cm. (Pl. I/43;)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Findspot: *principia* (CAL 2014, A, cx. 84, sf. 922)

Mureş County Museum, inv.: 8989.

44. Wall sherd of a Drag. 37 bowl, decorated with pearly lines (Rog. B134); d=22 cm; w=1.7 cm; th=0.6 cm. (Pl. I/44; Pl. III/44)

Ware from Lezoux, workshop of Paternus II.

AD 70–100

Findspot: *vicus* (CAL 2019, *passim*)

Mureş County Museum, inv.: 8951.

45. Rim fragment of a Drag. 42 bowl, undecorated; d=14 cm; w=1.2 cm; th=0.4 cm. (Pl. I/45; Pl. III/45)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Findspot: *vicus* (CAL 2014, fieldwalking, grid no. 725/1850 R4, sf. F1077)

Mureş County Museum, inv.: 17996.

46. Rim fragment of a Drag. 31 bowl, undecorated; d=24 cm; w=2.3 cm; th=0.6 cm. (Pl. I/46; Pl. III/46)

Ware from Lezoux.

AD 150 – end of 2nd c. AD

Context-specific dating: Destruction layer with daub in the back of the *principia*, 3rd c. AD.

Findspot: *principia* (CAL 2014, A, cx. 84, sf. 923)

Mureş County Museum, inv.: 16115.

47. Wall sherd. Type unidentifiable due to the high degree of fragmentation. Undecorated; w=2.7 cm; th=0.6 cm. (Pl. I/47)

Ware from Lezoux.

1st c. AD – end of 2nd c. AD

Findspot: *principia* (CAL 2015, A1, cx. 127, sf. 10377) Mureş County Museum, inv.: 8982.

Central Gaul: unknown workshops

48. Wall sherd. Type unidentifiable due to the high degree of fragmentation. Undecorated; w=1 cm; th=0.2 cm. (Pl. I/48)

Ware from Central Gaul (Lezoux?).

1st c. AD – end of 2nd c. AD

Findspot: *vicus* (CAL 2019, C6, cx. 2132, sf. 6127)

Mureş County Museum, inv.: 8960.

49. Base fragment of a Drag. 45 *mortaria*, undecorated; d=8 cm; w=2.6 cm; th=1.1 cm. (Pl. I/49; Pl. III/49)

Ware from Central Gaul (Lezoux/Les Martres-de-Veyre?).

1st c. AD – end of 2nd c. AD

Findspot: *vicus* (CAL 2013, C, cx. 2018, sf. 2604)

Mureş County Museum, inv.: 8984.

50. Wall sherd of a Drag. 35/36 cup, decorated

with an incised line, following the shape of the body; d=12 cm; w=1.2 cm; th=0.5 cm. (Pl. I/50; Pl. III/50)

Ware from Central-Gaul.

1st c. AD – end of 2nd c. AD

Context specific-dating: Fragment found in the fill of a pit from the Roman period, 3rd c. AD.

Findspot: *vicus* (CAL 2016, C3, cx. 2122, sf. 6021)

Mureş County Museum, inv.: 8930.

51. Wall sherd. Type unidentifiable due to the high degree of fragmentation. Undecorated; d=20 cm; w=2.8 cm; th=0.75 cm. (Pl. I/51)

Ware from Central Gaul (Lezoux/Les Martres-de-Veyre?).

1st c. AD – end of 2nd c. AD

Findspot: *vicus* (CAL 2014, C3, cx. 2034, sf. 5555)

Mureş County Museum, inv.: 16112.

52. Rim fragment of a Drag 30 bowl, decorated with an external cannellure, following the shape of the wall; d=18 cm; w=1.8 cm; th=0.5 cm. (Pl. I/52; Pl. III/52)

Ware from Central Gaul.

1st c. AD – end of 2nd c. AD

Findspot: *vicus* (CAL 2019, C6, cx. 2132, sf. 6334)

Mureş County Museum, inv.: 8938.

53. Wall sherd. Type unidentifiable due to the high degree of fragmentation. Undecorated; w=1.8 cm; th=0.5 cm. (Pl. I/53)

Ware from Central Gaul.

1st c. AD – end of 2nd c. AD

Findspot: *principia* (CAL 2015, A1, cx. 117, sf. 10063) Mureş County Museum, inv.: 8928.

Germania Superior: Rheinzabern

54. Base fragments (3) of a Drag. 18/31 plate; undecorated; d=9 cm; w=1.5 cm; th=0.7–1 cm. (Pl. I/54; Pl. III/54)

Ware from Rheinzabern.

cca. AD 160

Context-specific dating: One of the fragments found in a clay layer between the topsoil and the archaeological levels, belonging to the Roman

period, while the other two were found in a stone paving, 3rd c. AD.

Findspot: *vicus* (CAL 2016, C3, cx. 2085, sf. 5622, 5621) Mureş County Museum, inv.: 8944, 16116.

55. Wall sherd of a Drag. 37 bowl, bearing the stamp *[RE]CINVS FE(cit)* (Reginus XI), decorated with an erotic scene (Déch. 191), semi-circular motif and a column motif;⁶⁵ d=26 cm; w=3.7 cm; th=0.8 cm. (Pl. I/55; Pl. III/55)

Ware from Rheinzabern, workshop of Reginus XI.

AD 180–235

Findspot: *vicus* (CAL 2016, *passim*)

Mureş County Museum, inv.: 8963.

56. Wall sherd of a Drag. 37 bowl, decorated with an erotic scene (Déch. 191), possible representation of Amor and Psyche⁶⁶; d=24 cm; w=2.6 cm; th=0.7 cm. (Pl. I/56; Pl. III/56)

Ware from Rheinzabern.

AD 160–230

Findspot: *vicus* (CAL 2019, *passim*)

Mureş County Museum, inv.: 8932.

57. Base fragment of a Drag. 37 bowl, bearing the stamp *CE(rialsis)[·F·](ecit)* (Cerialis V), decorated with a medallion motif (Osw. 918) around the stamp; d=5 cm (base); w=0.5 cm; th=0.7 cm. (Pl. I/57; Pl. III/57)

Ware from Rheinzabern, workshop of Cerialis.

AD 160–180

Findspot: *vicus* (CAL 2019, C6, cx. 2132, sf. 6093)

Mureş County Museum, inv.: 8923.

58. Wall sherd. Type unidentifiable due to the high degree of fragmentation. Undecorated; w=2.8 cm; th=0.5 cm. (Pl. I/58)

Ware from Rheinzabern.

AD 160–230

Findspot: *vicus* (CAL 2014, fieldwalking, grid no. 750/2075 R4, sf. F1060)

Mureş County Museum, inv.: 17244.

59. Rim fragment of a Drag. 30 bowl, decorated

with *ovolo* (Rog. B55); d=16 cm; w=4.7 cm; th=0.7 cm. (Pl. I/59; Pl. III/59)

Ware from Rheinzabern.

AD 160–230

Findspot: *vicus* (CAL 2019, C6, cx. 2132, sf. 6339)

Mureş County Museum, inv.: 8950.

60. Wall sherd. Type unidentifiable due to the high degree of fragmentation. Undecorated; d=18 cm; w=2.4 cm; th=0.7 cm. (Pl. I/60)

Ware from Rheinzabern.

AD 160–230

Findspot: *vicus* (CAL 2016, C3, cx. 2121, sf. 5821)

Mureş County Museum, inv.: 8927.

61. Rim fragment of a Drag. 37 bowl, decorated with *ovolo* (Rog. B105), pearled line (Rog. A2) and a hunting scene motif (Déch. 636); d=22 cm; w=4.7 cm; th=0.7 cm. (Pl. I/61; Pl. III/61)

Ware from Rheinzabern, workshop of Reginus XI.

AD 180–235

Context-specific dating: Fragment found in a walking level of the Roman period, 3rd c. AD.

Findspot: *vicus* (CAL 2014, C1, cx. 2061, sf. 4923)

Mureş County Museum, inv.: 8999.

62. Rim fragments (2) of a Drag. 31 bowl, undecorated; d=21 cm (wall), 26 cm (rim); w=5.5 cm; th=0.7–1 cm. (Pl. I/62a–b; Pl. III/62)

Ware from Rheinzabern.

AD 160–230

Findspot: *vicus* (CAL 2013, C, cx. 2001, sf. 2417)

Mureş County Museum, inv.: 8939, 8946.

63. Rim and wall fragments (2) of a Drag. 31 bowl, undecorated; d=26 cm; w=2.1–2.3 cm; th=0.5 cm. (Pl. I/63a–b; Pl. III/63)

Ware from Rheinzabern.

AD 160–230

Context-specific dating: Fragment found in a destruction layer of a wooden structure, Roman period, 3rd c. AD.

Findspot: *vicus* (CAL 2013, C, cx. 2018, sf. 2670)

⁶⁵ HARTLEY ET AL. 2011, 361; LUDOWICI 1912, Taf. 138, 009.

⁶⁶ DÉCHELETTE 1904, 40.

Mureş County Museum, inv.: 8940.

64. Rim fragment of a Drag. 31 bowl, undecorated; d=16 cm; w=2.9 cm; th=0.6 cm. (Pl. I/64; Pl. III/64)

Ware from Rheinzabern.

AD 160–230

Context-specific dating: Fragment found in a destruction layer of a wooden structure, Roman period, 3rd c. AD.

Findspot: *vicus* (CAL 2013, C, cx. 2018., sf. 2604)

Mureş County Museum, inv.: 8947.

65. Rim fragment of a Drag. 31 bowl, undecorated; d=22 cm; w=5.2 cm; th=0.7 cm. (Pl. I/65; Pl. III/65)

Ware from Rheinzabern.

AD 160–230

Context-specific dating: Fragment found in a clay layer on a stone paving, situated in the back of the *principia* to South and West, 3rd c. AD.

Findspot: *principia* (CAL 2016, A4, cx. 338, sf. 10698) Mureş County Museum, inv.: 8997.

66. Wall sherd of a Déch. 72 jar, decorated with cannellures; w=1.5 cm; th=0.25 cm. (Pl. I/66; Pl. III/66)

Ware from Rheinzabern.

AD 160–230

Context specific-dating: The fragment comes from the fill of a pit, which was interpreted as belonging to the demolition layer of a wooden structure, which had a stone base. 3rd c. AD.

Findspot: *vicus* (ERC 2018, AIII/80 CM 12–13, cx. 176, sf. 550) Mureş County Museum, inv.: 8987.

67. Wall sherd. Type unidentifiable due to the high degree of fragmentation. Undecorated; w=2.1 cm; th=0.3 cm. (Pl. I/67)

Ware from Rheinzabern.

AD 160–230

Findspot: *vicus* (CAL 2014, fieldwalking, grid no. 900/1925 R1, sf. F1021)

Mureş County Museum, inv.: 17997.

68. Wall sherd. Type unidentifiable due to the high degree of fragmentation. Undecorated; w= cm; th=0.5 cm. (Pl. I/68)

Ware from Rheinzabern.

AD 160–230

Context-specific dating: The fragment comes from a context interpreted as the foundation of a wooden structure or as an alley, 3rd c. AD.

Findspot: *vicus* (CAL 2016, C3, cx. 2083, sf. 5707)

Mureş County Museum, inv.: 8954.

69. Wall sherd of a Drag. 32 bowl, undecorated; d=16 cm; w=0,8 cm; th=0,6 cm. (Pl. I/69; Pl. III/69)

Ware from Rheinzabern.

AD 160–230

Findspot: *vicus* (CAL 2014, C1, cx. 2040, sf. 5021A)

Mureş County Museum, inv.: 8995.

70. Rim and wall fragments (2) of a Drag. 31 bowl, undecorated; d=26 cm; w=4.7 cm; th=0.8-0.9 cm. (Pl. I/70; Pl. III/70)

Ware from Rheinzabern.

AD 160–230

Findspot: *vicus* (CAL 2015, C4, cx. 2093, sf. 5553.)

Mureş County Museum, inv.: 16113.

Unidentifiable fragments

71. Wall sherds (2). Type and origin unidentifiable due to the high degree of fragmentation; undecorated; w=0.4-0.7 cm; th=0.1 cm. (Pl. I/71)

Context-specific dating: Fragments found in the fill of a posthole, 3rd c. AD.

Findspot: *vicus* (CAL 2013, C, cx. 2011, sf. 2407)

Mureş County Museum, inv.: 8953.

72. Wall sherd. Type and origin unidentifiable due to the high degree of fragmentation; undecorated; w=1.3 cm; th=0.5 cm. (Pl. I/72)

Context-specific dating: The fragment comes from a context interpreted as the foundation of a wooden structure or as an alley, 3rd c. AD.

Findspot: *vicus* (CAL 2016, C3, cx. 2083, sf. 5802)

Mureş County Museum, inv.: 8981.

73. Wall sherd. Type and origin unidentifiable

due to the high degree of fragmentation; undecorated; w=1.4 cm; th=0.3 cm. (Pl. I/73) Findspot: *principia* (CAL 2021, A8, *passim*) Mureş County Museum, inv.: 12133.

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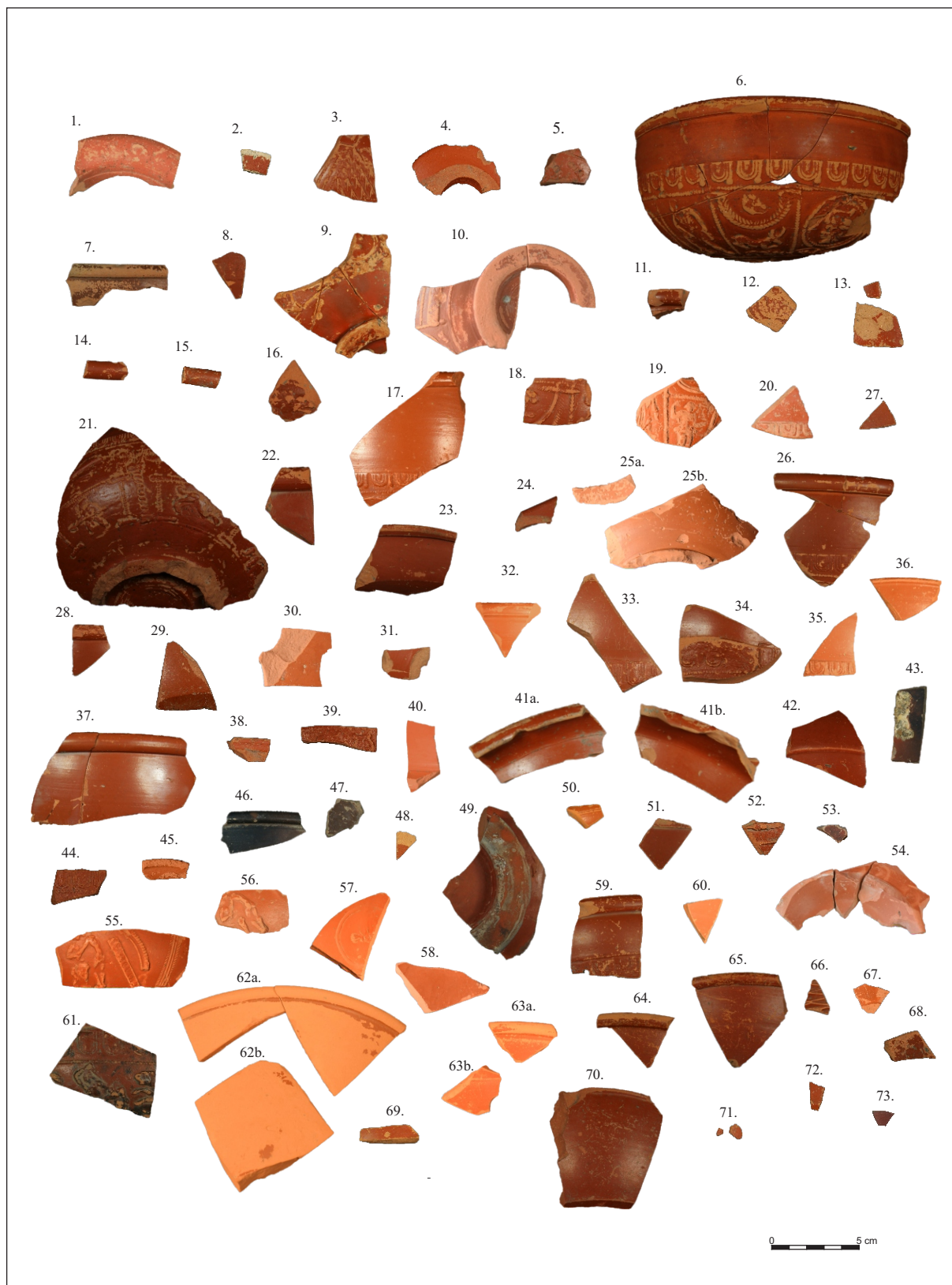
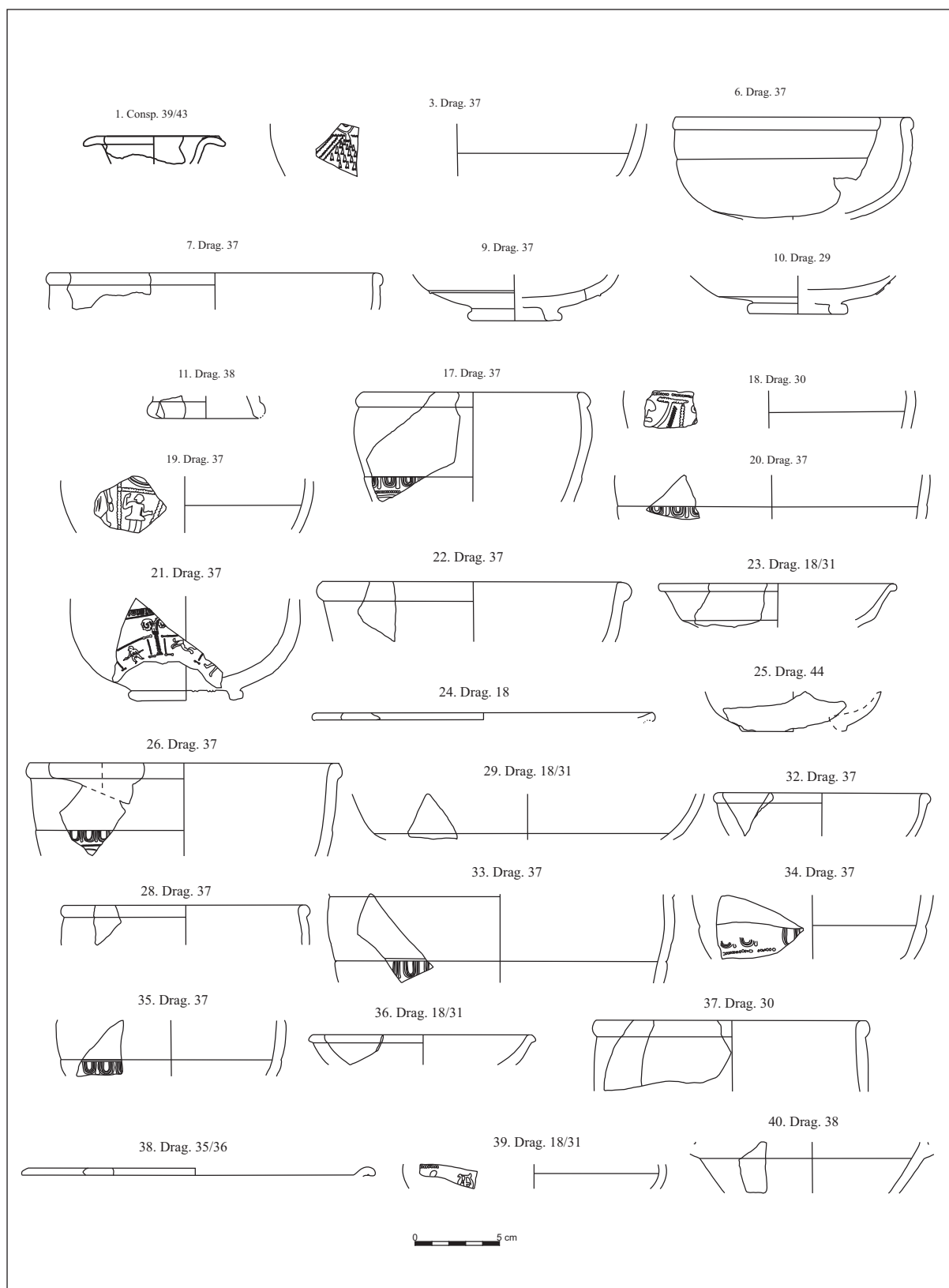
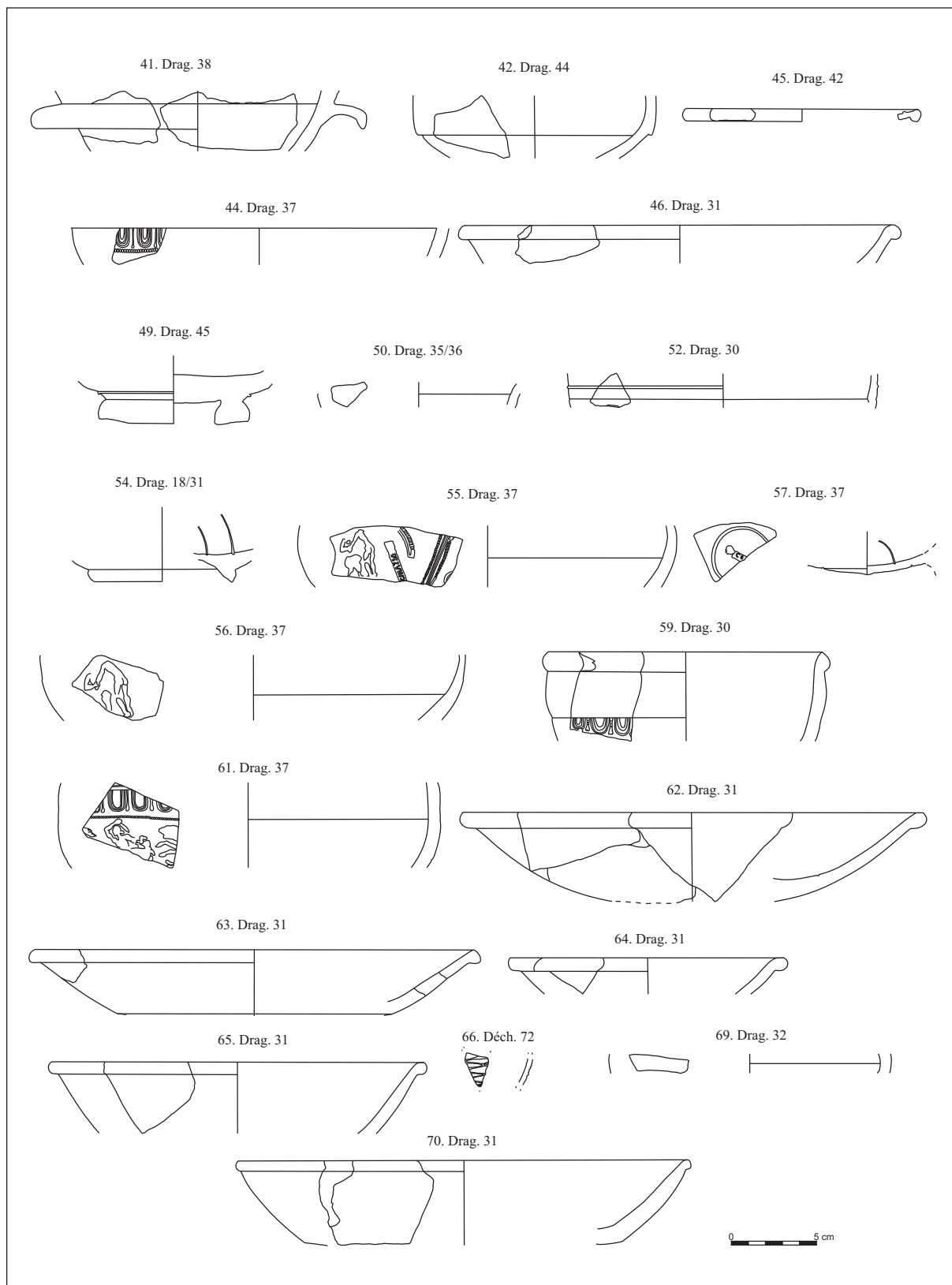


Plate I. The *terra sigillata* vessels from Northern Italy (1–2), La Graufesenque (3), Les Martres-de-Veyre (4–5), Lezoux (6–47), Central Gaul (48–53), Rheinzabern (54–70) and unknown production centres (71–73).

Plate II. Typologically classifiable *terra sigillata* vessels.

Plate III. Typologically classifiable *terra sigillata* vessels.

FROM SEED TO BREAD. WAS *PANIS ROMAE* LIKE OUR BREAD?

LÁSZLÓ SZEKERNYÉS* – SZILAMÉR-PÉTER PÁNCZÉL**

The aim of this paper is to analyse some aspects of the milling process, the fineness of the flour, the quality of bread and bakery products from the Roman age. By means of archaeological experiments we have analysed the practical aspects of the 'chaîne opératoire', such as productivity of the mill, quality of the grist and bread making.

Keywords: legionary mill, flour, Roman bread, wheat, sieve

Cuvinte-cheie: râșniță, făină, pâine romană, grâu, sită

Cereal consumption was part of the daily diet in the Roman Empire. The process of milling cereals in order to produce flour and bakery products was not only a large scale industry, but also a domestic activity.¹ The spread of the rotary quern, the *mola hispanensis* or *mola versatiles*, at the end of the Roman Republic, greatly facilitated the process of milling grain.² The evolution of the *mola hispanensis*, into the Roman *mola legionaria*³ was the ultimate advancement. We also have archaeological evidence and ancient sources on the existence of different flour types and bakery products.

The main question is whether Roman technology can produce suitable bakery products that meet our modern standards. Therefore, we reproduced the milling, sieving, and baking processes using cereal species known in the Roman age. Our aim was also to compare the Roman *mola legionaria* to the Egyptian saddle quern and to modern hand mills.

For the milling experiment we used the following six grain types known by the Romans,⁴

each weighing 500g (roughly 1 *sextarii*), necessary to make one Roman bread:⁵

1. Common wheat (*Triticum aestivum*) known as bread wheat or winter wheat, *siligo*,⁶ largely used in the Empire for making white bread, *panis siligneus* and quality pastry products.



Fig. 1. The *mola legionaria* reconstruction.

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¹ VERGILIUS, *Moretum*.

² For the terminology see also: SZEKERNYÉS–PÁNCZÉL 2022, 143–144.

³ PEACOCK 2013, 74.

⁴ GRÜLL 2013, 4–5.

⁵ JUNKELMANN 1997, 136.

⁶ PLINIUS, *Nat. Hist.* 18.10.

2. Spelt (*Triticum spelta*) or *arinca*,⁷ ancient wheat known today as dinkel wheat or hulled wheat, related to the winter wheat, also largely used.

3. Einkorn (*Triticum monococcum*), related to spelt.

4. Rye (*Secale cereale*), cultivated mostly in the *Barbaricum* in the regions of Europe with a temperate climate, resistant to harsh climatic conditions, and poorer soils. According to Pliny, this is the worst type of grain for bread, and it is only useful to avoid starvation.⁸

5. Barley in hulled form (*Hordeum vulgare*).

6. Millet (*Panicum miliaceum*) mainly used for porridge or as an addition to wheat flour in different bakery products.⁹

These grain types were largely cultivated in Roman times, used in the daily diet and were suitable for various bakery products. It is also important to mention that, they are the same from ancient to modern times in terms of grain hardness and gluten content.

What we know about the grinding process in the Roman Empire, is that two different methods of milling were used. On the one hand, it was done on a large scale with large Pompeian type mills, watermills and donkey mills. From the Imperial times onwards, this included the

bakers' guild called *corpus pistorum*.¹⁰ The second method was milling with rotary querns, in households for personal consumption. The latter was a common activity in rural households,¹¹ or a fancy aristocratic habit,¹² and was also used in the army.¹³

For the grinding we used a replica of a *mola legionaria*, used in the 2nd century A.D. The replica (Fig. 1) is a copy based on legionary mills discovered at the military site of Călugăreni / Mikháza, located on the eastern *limes* of Roman Dacia.¹⁴

The measurements refer to the entire grinding process, i.e. loading of the grain, collection of the grist and intermittent re-feeding of the hopper. The experiment contains two sets of grinding.

Firstly, the goal of grinding was the physical process as a daily duty, to obtain a flour to secure the 'iron ration' a *panis militaris*, a low quality whole wheat bread. This was an army bread that a soldier of the *contubernia* may have had to prepare. The verification process of the flour's quality was done superficially only by its physical aspects.

During the experiment (Fig. 2) we examined the following data based on different grain types: 1) grinding speed; 2) number of grind-

Grain type	1) Speed (rotation / min.)	2) No. of grindings / time for groats	3) No. of grindings / time for seconds	4) No. of grindings / time for finest flour
Wheat	40–45	2 / 3'05"	4 / 6'17"	6 / 9'40"
Spelt	40–45	2 / 3'00"	4 / 6'10"	6 / 9'30"
Einkorn	40–45	2 / 2'55"	4 / 6'12"	6 / 9'40"
Rye	40–45	4 / 5'20"	6 / 8'45"	not possible
Barley	40–45	2 / 1'50"	4 / 6'10"	not possible
Millet	40–45	1 / 0'40"	not possible	not possible

Fig. 2. Data collected during the grinding process.

whole process of grinding, sieving, and possibly baking on an industrial scale. It was made by the

ings / grinding time for groats; 3) number of grindings / grinding time to obtain whole wheat

⁷ PLINIUS, *Nat. Hist.* 18.10.

⁸ PLINIUS, *Nat. Hist.* 18.40.

⁹ PLINIUS, *Nat. Hist.* 18.24, 26.

¹⁰ GRÜLL 2013, 29.

¹¹ VERGILIUS, *Moretum*.

¹² SENECA, *Ep.* 119.

¹³ ROTH 1999, 48.

¹⁴ SZEKERNYÉS-PÁNCZÉL 2022.

flour; 4) number of grindings / grinding time to obtain fine flour.

The grinding speed could not be increased, not only because the seeds fall out from the mill due to the centrifugal force, but also because the grist flows quickly from the stones, thus reducing the efficiency. The optimum speed is between 40 rotations per minute (for the first grinding of the whole seeds) and 50 rotations per minute (for the subsequent grindings and the flour phases), regardless of the physical quality of the seed. In order to obtain fine flour, it is recommended not to sieve the grist in the intermediate phases. As a general remark it has to be mentioned, that the use of different groats sizes ensures maximum milling efficiency. Milling with the legionary mill was easy, roughly equivalent to the endurance of a 12–13-year-old child for 10–15 minutes, taking into account the entire interval. The reason for this is that the grain and grist assures a rolling friction and the *catillus* floats on the *meta* during the whole process.

To make *puls*¹⁵ or porridge, we can use any type of grain that can be ground, and it is a quick procedure. Course grinding does not affect the

high fibre and low gluten content. Only wheat grains are suitable to obtain fine flour for white bread, because of their relatively low fibre and high gluten content.

Converting the results to a *contubernium* (group of 8 soldiers), grinding the daily rations of 16 *sextarii* of grain (roughly 8kg), takes around 40–50' for *puls* and 1h40'–1h50' for bread. This is a reasonable estimate for a family of four as well, for a two-day timespan. The experiment of milling the daily ration for a *contubernium* carried out by Jodry on a *mola legionaria*, had a similar efficiency of 1h40' for 6,8kg of grain.¹⁶ Junkelmann obtained an efficiency of 1h40' for 5kg of grain.¹⁷ There are slight differences in the quantities of the daily ration, because we do not know the exact weight of the *frumentum*, only that it was two *sextarii* of grain per soldier in the Imperial times.¹⁸

According to Delwen's experiments with an Egyptian saddle quern, the milling time does not necessarily depend on the grain hardness, but rather on gluten and fibre content (Fig. 3).¹⁹

The Roman legionary mill is 4.6–5 times more efficient than the saddle quern in producing semolina and 8.4–9 times more efficient for

Wheat type	Wheat hardness	Time for milling coarse meal (s)	Time for milling fine meal (s)	Time for milling fine meal (s)
Zimmerhackl	very hard	18.3 +/- 1.5	27.7 +/- 2.5	46 +/- 3.5
Duilio	hard	22.3 +/- 2.5	29.3 +/- 2.1	51.7 +/- 3.8
Garfagnana	soft	17 +/- 1.7	23 +/- 3.5	40 +/- 4.6
Centauro	soft	23 +/- 1.7	33.7 +/- 2.5	56.7 +/- 4.2

Fig. 3. Time to grind 10g of wheat with the grinding stone (DELWEN 2010, 473, Table 4).

internal characteristics of the grain, and it is possible to obtain rough flour, or seconds for *panis militaris*, *panis cibarius*, *panis plebeius*, military or ordinary bread. Millet is an exception, producing only fine semolina during the whole grinding process. The reason may be its high fibre content and lack of gluten. Rye also takes longer to grind into wheat because of its

the production of fine flour. The efficiency of the Roman mills is also demonstrated by their longevity. According to Jodry, the hand mills of the French army of the 18–19th century had a similar productivity.²⁰

As a preliminary conclusion, it is obvious, that the grain processed with Roman legionary mill was suitable for making bread. The main

¹⁵ PLINIUS, *Nat. Hist.* 18. 10.

¹⁶ JODRY 2011a, 73.

¹⁷ JUNKELMANN 1997, 118.

¹⁸ ROTH 1999, 43.

¹⁹ DELWEN 2010.

²⁰ JODRY 2011b, 85–86.

question is whether the quality of flour and bread could be used to make products according to modern standards. We have reports from ancient texts about grain qualities, flour types, various bread and pastry products and ingredients.²¹ We also have archaeological evidence about their aspect and obviously subjective sources about their taste.

To compare the flour obtained and the taste of bakery products with the flour of the modern milling industry and bakery products, we need a different, rather experimental approach.

To reveal some aspects of this issue, we tried to reproduce the whole process from milling to baking according to the Roman sources. In this experiment we did not try to reveal the efficiency, but the quality of the ingredients in comparison with modern techniques.

As a first step, we milled the same quantity of different grain types, focusing only on obtaining the finest flour possible (Fig. 4).

The physical quality of flour depends on the particle size, the finest flour being the best quality. In the Roman era there were two ways to obtain quality flour, either by grinding the grain to the finest size, or/and by sieving it to separate fine flour. The Romans used sieves²² to obtain fine flour, however we have no information about the sieve size. They probably used crinoline (horsehair) sieve, or linen cloth.²³ For measuring the particle size of the flour, we used sieves with different mesh sizes (Fig. 5). The mesh sizes are in accordance with present-day

Cereal type	Speed (rotation / min.)	No. of grindings / time for finest flour
Common wheat	50–60	7 / 12' 20"
Spelt	50–60	7 / 16' 50"
Einkorn	50–60	5 / 11' 10"
Rye	50–60	7 / 13' 10"
Barley	50–60	7 / 11' 14"
Millet	50–60	5 / 9' 10"

Fig. 4. Data collected during the grinding process to obtain the finest flour.

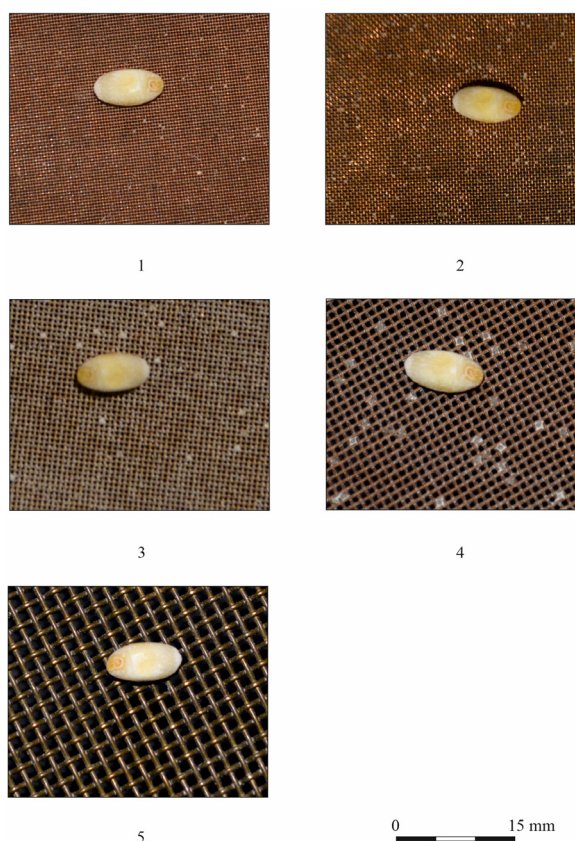


Fig. 5. Modern mesh sizes in the food industry (5/1. 180 µm; 5/2. 250 µm; 5/3. 315 µm; 5/4. 500 µm; 5/5. 2000 µm).

mill industry standards to obtain different flour categories (Fig. 6).²⁴

The purpose of the sieving experiment was to obtain flour for kneaded and leavened bread in a reasonable time, based on visual quality control and tasting experience. Hence, we sieved only at the end of the milling process. We also presume that the sieves used by the Romans were less efficient than modern industrial sieves. If they made flour of modern standard quality, they did it by refilling the intermediary grist. In the light of this, we used modern sieves to compare sieved flour with modern milling products (Fig. 7).

In the sieving experiment we divided the grain types into two categories:

²¹ PLINIUS, *Nat. Hist.* 18.10, 20.

²² VERGILIUS, *Moretum*.

²³ PLINIUS, *Nat. Hist.* 18.28.

²⁴ MAGYAR ÉLELMISZERKÖNYV 2014, 17–20, 35.

Sieve size / percentage	Particle size				
	'Strudel' flour (BFF 55)	White bread flour (BL 55)	Rough bread flour (BTKL)	Graham bread flour (BGL)	Rye flour (RL)
	360µm/100% 160µm/max. 25%	315µm/min. 100% 250µm/min. 95%	500µm/min. 85% 315µm/min. 70%	>2000µm/100 % 315µm/min. 70%	250µm/min. 100%

Fig. 6. Particle size of different modern flour types (MAGYAR ÉLELMISZERKÖNYV 2014, 6–20).

1. Wheat grain – common wheat, spelt and einkorn.

2. Rye, barley and millet.

There is a difference between the two categories, based on their gluten content. The first is high in gluten and is suitable for leavened bread, the second is low in gluten and is mainly used as admixture in the dough.

In case of the wheat, sizes over 2000µm are accidental bran or grain pieces stuck in the mill. The common wheat flour is the finest, and the

Surprisingly, milling einkorn seems to give similar results as milling common wheat.

Rye and barley, from the second group, seem unsuitable for fine flour with a legionary mill. We know from Pliny²⁶ and archaeological evidence that Romans and barbarians made porridge or unleavened bread from these grains. By grinding millet, we quickly and easily obtained a very good quality semolina, but it was impossible to obtain fine flour.

To have a general understanding of what

Cereal type	No. of grindings / time for finest flour	Particle size µm %				
		>2000	<500	<315	<250	<180
I. Common wheat	5 / 12'20"	4%	85%	65%	41%	9%
I. Spelt	7 / 16'50"	14%	60%	39%	23%	2%
I. Einkorn	5 / 11'10"	7%	73%	52%	35%	5%
II. Rye	7 / 13'10"	40%	46%	-	-	-
II. Barley	7 / 11'14"	63%	-	-	-	-
II. Millet	5 / 9'10"	3%	87%	31%	3%	-

Fig. 7. Particle sizes after sieving the flour.

results of sieving show that without intermediary sieving we obtain significant quantities of quality flour. This suggests that rough bread (BTKL) or graham bread (BGL) flour was quite common in the Roman times. White bread flour (BL55) requires a process of intermediary bolting, but it was also possible to produce. It is almost impossible to obtain very fine 'strudel' flour (BFF55) in an average domestic grinding process. Pliny mentions a type of very fine flour called *fos* or pollen, used in copper works and certain manufactories,²⁵ that could be a possible equivalent to 'strudel' flour. Spelt is also suitable for the same quality flour as common wheat, the major difference being that it is much more labour intensive to obtain similar products.

bread meant to the Romans, we made baking experiments with the flour varieties to test the possible final products (Fig. 8–9). The purpose was to reproduce the physical properties of the bread variants. The only extra ingredient in the modern version was the yeast. When kneaded, it technically produces the same chemical effect as the Roman dough: it produces carbon dioxide which makes the bread grow. According to Pliny, dough was quite common in Roman times. He mentions four kinds of leaven recipes: made with millet and must, wheat-bran and must, barley and vetch with water, or reused bread dough.²⁷

In the recipe we used the obtained flour types, water, salt and yeast, as follows: flour

²⁵ PLINIUS, *Nat. Hist.* 18.10, 20.

²⁶ PLINIUS, *Nat. Hist.* 18.13.

²⁷ PLINIUS, *Nat. Hist.* 18.26.

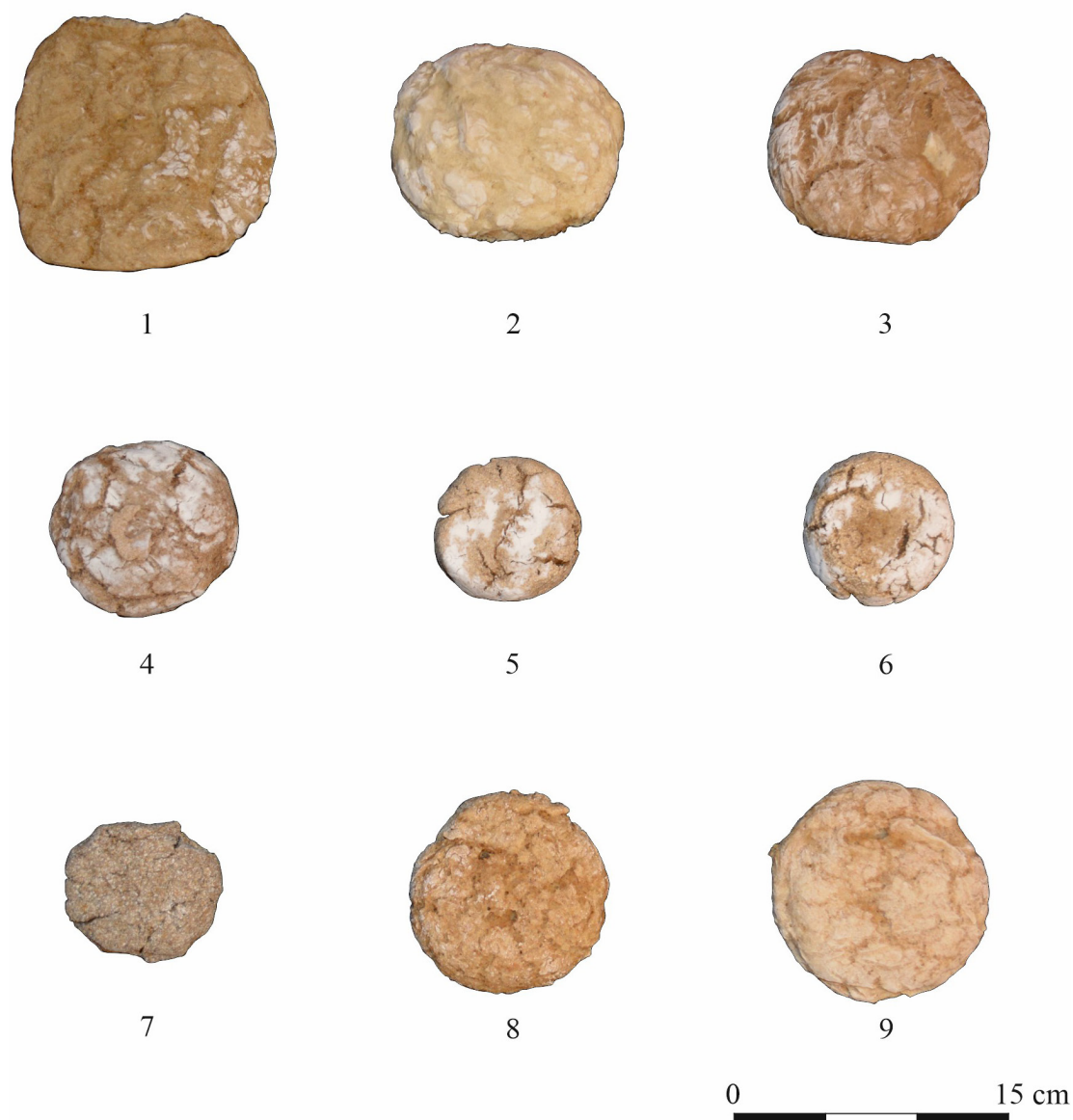


Fig. 8. The external aspect of the bread variants.

100g, water approx. 70g, yeast 10g and a pinch of salt.

The wheat breads made from fine flour (types 1–3, 9) are just like our modern breads, in every sense of the word. All the organoleptic qualities fit our modern standards. They are edible for several days, even when they dry. Types 4 and 8 are similar in physical aspects and taste to our brown bread. Types 5–7 are similar to the

modern multigrain or fitness type of bread, low leavened even with the use of yeast.

In the Roman age, quality wheat bread was at least as good as our country bread. The Romans had the whole technological chain to make good bread, with a great variety of shapes, baking techniques²⁸ and ingredients for each taste.²⁹ The variety of grains and different wheats like *siligo*, *arinca*, *gaulian*, African wheat, Campanian

²⁸ PLINIUS, *Nat. Hist.* 18.27.

²⁹ PLINIUS, *Nat. Hist.* 18.27.

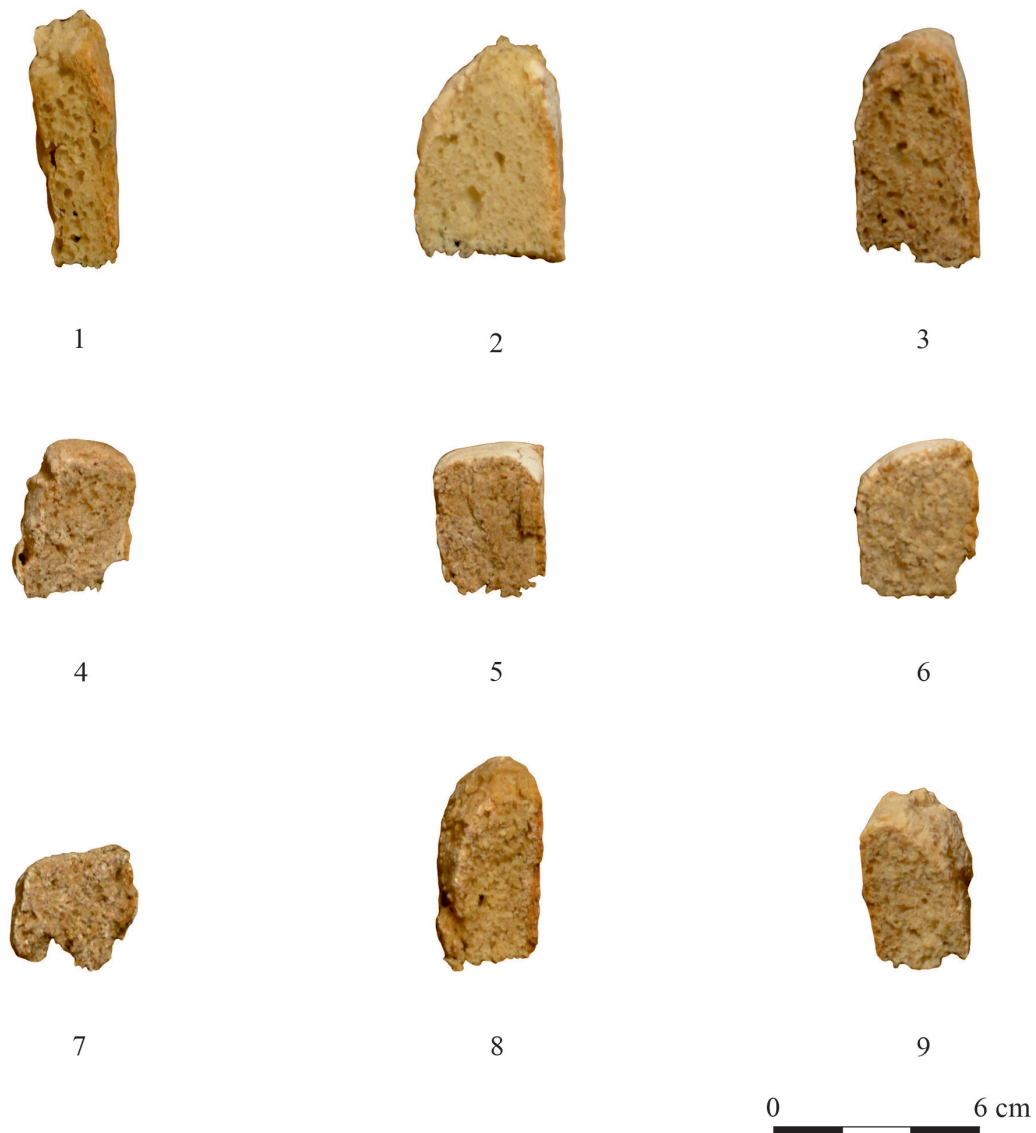


Fig. 9. The internal aspect of the bread variants.

Bread type (Fig. 9–10) based on modern flour types	Dough quality	Bread consistency	Taste
1. Einkorn white bread~ BL55	very soft	well leavened, very soft	very good
2. Common wheat white bread~ BL55	soft	well leavened, soft	very good
3. Spelt white bread~ BL55	medium soft	leavened, soft	good, sweetish
4. Spelt rough bread~ BTKL	medium hard	low leavened, dense, soft	good, sweetish
5. Rye flour (>2000 20%, >500 80%)	very hard	unleavened, dense, short pastry, crumbling	bittersweet
6. Barley flour (>2000)	very hard	low leavened, dense, short pastry, crumbling	acceptable, bittersweet
7. Rye flour (>2000 80%, <2000 20%)	very hard	unleavened, dense, short pastry, crumbling	sour, bittersweet
8. Einkorn rough bread~ BTKL	soft	leavened, soft	good
9. Mix white bread (einkorn 15%, spelt 15%, wheat 70%)	soft	well leavened, soft	very good

Fig. 10. Data collected during the bread baking process.

wheat, Pisan wheat or the ones from Clusium and Arretium³⁰ had similar features to modern wheat. The milling process made it technically possible to produce fine flour by modern standards, even using legionary mills. Although they did not have the equipment to obtain fine flour with a sieving technology, they replaced this with their milling expertise. Sieves were only used to separate the bran, impurities, and for

additional refinement. There was also a popular belief that leavened wheat bread was healthier.³¹ It is also presumable, that not everyone could afford quality wheat bread, and in harsh times the Romans ate whole wheat bread, rye bread, oat bread, or rough bread. During campaigns, soldiers ate what they managed to prepare: *panis militaris* or *bucellatum*.³²

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A MEDIEVAL FINGER RING WITH CHRISTIAN MOTIF FROM GĂLĂȚENI / SZENTGERICE

ÁLDOR CSABA BALÁZS

The area around Gălățeni village, Mureș county, on the left bank of Niraj river is poor in archaeological sites. From the settlement and nearby villages only a couple isolated finds are known, early bronze age and bronze age objects¹. The paper presents a silver ring fragment which was found with a metal detector on a hilltop covered with dense forest, at east from the village, at a depth of about 20 cm. We consider it is important to be documented, as it could have belonged to one of the first settlers of the medieval village Sancta Gerecia.

Keywords: finger-rings, jewelry, middle ages, christian symbols, metal-detecting

Cuvinte-cheie: inele, podoabe, ev mediu, simboluri creștine, detectarea metalelor

I. INTRODUCTION

Gălățeni is first mentioned in 1332 as Sancta Gerecia, S. Graxia, in the Papal Regestrum,² when the parish priest, Laurentius,³ pays 25 denars for the papal income tax⁴, so one can assume that a church had already existed at that time. The tax paid is higher as the ones mentioned in the papal registers from other settlements in the area, possibly meaning that Sancta Gerecia was already a large village in the early 14th century. The name of the settlement could have its origin in the first parish church patrona, which was probably built in the late 13th – early 14th century.⁵ In the 15th century it was rebuilt and after several other restorations today this is the local Unitarian church, while it still keeps a few elements from its first, gothic phase. Karácsonyi János believes that a saint of

the Franciscan order, Gratian, who passed away in 1263 might have been the patrona of the first church⁶. The Franciscan friars arrived in Târgu Mureș in 1316, and they might have had a role in spreading devotion towards this particular saint. The finger ring presented in this paper was found on a hilltop a few hundred meters at SE from this church (Fig. 1).

People have used rings since ancient times not just as an accessory, ornament to enhance the beauty or status of the wearer, but also for the symbols they incorporate. The medieval finger rings are seldom discovered in clearly datable context. Although they are not rare in burials, only a small percent of the published rings came from graves. In the last years metal detecting has become very popular and medieval rings are

¹ ROSKA 1942, 265–266.

² BEKE 1894, 169; ORBÁN 1868, IV, 56, note 3.

³ ORTVAY 1892, 995.

⁴ Orbán Balázs mentions 55 denars (“Laurentius sacerdos de S. Gerecia solv. 55 denarios”). This might be an error, the amount is too high compared to the tax paid to the Tileagd archdeaconry by other settlements in the Niraj valley in the same year.

⁵ LESTYÁN 2000, 62.

⁶ KELEMEN 1982, 177.

found almost on a daily basis now.⁷ There are a few design types which come up quite often, but two identical medieval rings are almost impossible to find. Beside various geometrical, floral or abstract patterns, a number of medieval rings present Christian motifs, like the one found at Gălățeni.

In the 20th century two significant papers were published about the medieval rings found on the territory of the medieval Hungarian Kingdom, first by Mária Hlatky in 1938,⁸ and four decades later by Zsuzsa Lovag.⁹ In 1962 Szőke Béla in his work on Arpadian artifacts compiled the known rings as well.¹⁰ We also must mention the university thesis of Zoltán Litauszki,¹¹ who examined the rings found on the Southern Great Plain of Hungary (Bács-Kiskun, Békés, Csongrád Counties). Péter Langó discussed

the 10th century rings found in the Carpathian basin, with widening bezel and rhombic head,¹² while for the same area Keszi Tamás earlier constructed a typology for the closed hoop plate rings.¹³ For the lower Danube area Luminița Dumitriu published a monograph on the jewelry from the 11th–15th centuries, where she classified the rings in two major groups: rings with chaton and without chaton.¹⁴

In an ampler approach on minor medieval art from Banat, Dumitru Țeicu compiles the finds from the region, with a chapter dedicated to the rings, without constructing typologies.¹⁵ At south from the Danube river, in medieval Bulgaria, Valeri Grigorov's thesis examines the medieval jewelry from the 7th–11th centuries and groups the rings by formal typology and decorations.¹⁶

THE RING

The ring found at Gălățeni (Fig. 2) belongs to the ample category of pieces with bezel joint with the hoop. It has a circular shaped top with 10mm bezel size and a 3.20 mm wide, 1.50 mm thick flat hoop. The hoop has a shoulder which widens from 3.20 mm to 6.53 mm just below the bezel with several scratched lines as ornament. The fragment weights 1.19 gr and the ring hoop diameter can be estimated to about 20 mm. Judging by its size, it was probably a woman's finger ring. In the Luminița Dumitriu classification of the medieval minor art from Wallachia and Dobrogea, this jewelry is type III 1.1.2.1.b,¹⁷ but with no specimens listed from Walachia

with close formal type to the ring from Gălățeni. From Dobrogea we can mention a couple of rings from Enisala¹⁸ and Păcuiul lui Soare,¹⁹ from a Byzantine context.

The ring was cast from an alloy of silver with majority base metal content, probably copper (billon). Typically, finger rings with raised bezel were cast.²⁰ It was decorated in the mold with a vaguely rhomb-shaped outer frame. After casting a smooth rasp was probably used to take off excess material and shape the ring bezel. Its main decoration is a cross with arms of equal length (a Greek cross), made by means of engraving. The cross divides the bezel in four slices

⁷ CRAIOVAN 2019; VOINAGHI 2023.

⁸ HLATKY 1938.

⁹ LOVAG 1980.

¹⁰ SZŐKE 1962, 64–65.

¹¹ LITAUSZKI 2012.

¹² LANGÓ 2016.

¹³ KESZI 1999.

¹⁴ DUMITRIU 2001, 51–52.

¹⁵ ȚEICU 2009, 41–44.

¹⁶ GRIGOROV 2007, 186–199.

¹⁷ DUMITRIU 2001, 55, pl. 5/14–25.

¹⁸ DUMITRIU 2001, pl. 71/3.

¹⁹ DUMITRIU 2001, pl. 82/19.

²⁰ OȚA 2008, 112–114.



Fig. 1. 1. The place of discovery mapped on the first Austrian military survey (1763–1785); 2. The place of discovery on Google Earth aerial view map.



Fig. 2. The ring fragment discovered at Gălățeni, photo and reconstruction.

and in each there is a vaguely crescent-shaped decoration, all of them shaping a *crux gammata* (Fig. 2). This was a disguised form of the cross and in Rome it is called *crux dissimulata*, while

the early Christians had to conceal themselves. The church didn't adopt the crucifix until the 6th century, when Christianity became the official religion of Rome.

THE CRUX GAMMATA SYMBOL

The Christian cross, with or without a figure of Christ included, is the main religious symbol of Christianity. For Christians the symbol of the cross is frequent also on smaller value items, accessible for common people, considered to have a protective function. The Greek cross, which designates a cross with arms of equal length, as in a plus sign, was in common use already by the 4th century and it is depicted on jewelry continuously through the middle ages.

A symbol largely employed during the 3rd and 4th centuries, the *crux gammata* closely resembles the cross. Together with the *crux ansata* it was used by the early Christians before they adopted the cross as the symbol of their religion. The *crux gammata* is fairly common on Christian monuments of Rome, while the cross is absent from the oldest Christian catacombs of the city. In an arcosolium in the catacomb of St. Generosa we can see the *crux gammata* painted twice on the Good Shepherd's tunic, and in the catacombs of St. Domitilla the same on the tunic of the fossor Diogenes (Fig. 4).²¹ It was often represented also on domestic utensils and cups on the tombs of early martyrs.²²



Fig. 3. *Crux gammata* and christogram in the catacombs of Rome (apud Zmigrodzki 1890, No.134).

"In the western church the word gammadia is of frequent occurrence in the later papal biographies, in Anastasius, in the lists of offerings made to the basilicas and churches, e. g., Leo III. among gifts to the Church of St. Susanna gave a purple

vestment, 'having on the middle a cross of golden stripes, . . . and four golden-striped gammadions in the vestment itself,' and Leo IV. to the Church of St. Mary at Anagni 'a vestment with gammadions woven in gold.'" (A Dictionary of Christian antiquities).²³

According to Giovanni Battista De Rossi's research on the chronology of this symbol

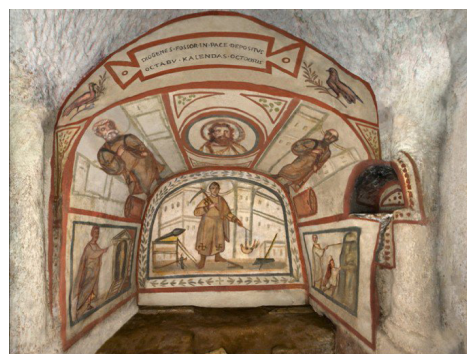


Fig. 4. Virtual reconstruction of the burial niche of the fossor (gravedigger) Diogenes (Photo: M. Limoncelli – N. Zimmermann, Domitilla-Projekt, DAI Rome).

and their examples from the catacombs under Rome, it was seldom or never used till the first half of the third century.²⁴ It is known that early Christians sought means to portray and in the meantime conceal the cross of Christ and this way the *crux gammata* was adopted. With the appearance of the Christogram and the acceptance of the cross as symbol of Christian faith, the *crux gammata* began to fall in disuse, but was never fully abandoned. In gepidae environment a large variety of Christian artifacts were discovered, and while on most of them the main symbol is the latin cross, there are also two fibulae from Debrecen which clearly depict a *crux*

²¹ KRAUS 1896, 170.

²² ZÖCKLER 1875, 141.

²³ CHEETHAM 1908, 709.

²⁴ DE ROSSI 1864, 318.

gammata.²⁵ In the 8th century this symbol is still in use as an ornament in the sacerdotal garments embroidery.²⁶

The *crux gammata* is widely accepted as a composition of four letters gamma. There is a unique mosaic wall decoration in the Basilica

although similar patterns have been found in several locations. Erwin R. Goodenough notes that these markings often appear on important religious paintings and figures. He believes that the importance of the art and textiles in which these markings are depicted substantiates the



Fig. 5. Wall mosaic, Basilica Sant'Apollinare Nuovo, Ravenna (photo: William M. Timlin, meisterdrucke.uk).

of Sant'Apollinare Nouvo from Ravenna, built in late 5th or early 6th century, which depicts the *gammadia* on many of the vestments of the religious figures (Fig. 5). Theodore Balsamon, eastern orthodox patriarch of Antioch between 1185–1199, in the enumeration of the marks of patriarchal dignity mentions the robe trimmed with gammas: “*These crosses were peculiar to the white Eucharistic vestments, those of a purple color being destitute of them.*”²⁷

John W. Welch and Claire Foley say that scholars refer to the *crux gammata* as *gammadia*, while some of them are shaped like the Greek letter gamma (Γ).²⁸ They’ve observed that the significance of these markings remained unknown to archaeologists and art historians,

marks’ religious and symbolic significance, although he admits that his opinion has not been fully substantiated²⁹. Goodenough is calling “ceremonial garments” with “symbolic force” all clothing that contains *gammadia*. According to him, these may come from a “ritualistic treasure” of items, the nature of which “neither the paintings nor the textiles, unfortunately, make explicit.”³⁰

From Romania we must mention the ceramic vessel with *crux gammata* decoration found in 3rd century Carpic environment at Varnița, and a cup from Cioreni-Timișoara from a 3rd–4th century settlement.³¹ While at the Carpic vessel we cannot consider this symbol as being a Christian representation but more likely

²⁵ BÓNA 1976, 64, fig. 24.

²⁶ CARUS 1902, 361.

²⁷ CHEETHAM 1908, 709.

²⁸ WELCH – FOLEY 1996, 253.

²⁹ GOODENOUGH 1964, 162.

³⁰ GOODENOUGH 1964, 128, 164.

³¹ BENEÀ 1995, 369–370.

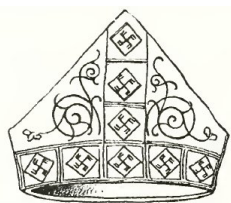


Fig. 6. An abbots' mitre of the 8th century (apud Zmigrodzki 1890, No.138).

solar-cult-linked, the *crux gammata* on the cup from Cioreni might indicate an early coexistence of pagan and Christian symbolism.³² Mircea Ignat lists 6 pottery fragments from the 4th century having the same decoration, all from the area between the Carpathian Mountains and Nistru River. From Dinogetia we have a 5th–6th century, north-African type terracotta oil lamp with the same decoration.³³ A 5th century brick from the collection of Muzeul Olteniei, Craiova, with unknown origin has an incised decoration made from small circles, in the shape of a *crux gammata*.³⁴ Ignat also compiled a list of the ceramic finds from the 6th–7th centuries, all being found within settlements. Three are from Muntenia, five from Basarabia.³⁵ If they are early-Christian signs is debated, but some of them can be also solar-cult-related. It is certain that all representations of the *crux gammata* which are earlier as the middle of 3rd century cannot be seen as Christian symbols.

In 1952 at Mangalia (Constanța county) a byzantine amphorae was found which was decorated with a *crux gammata* below one of its handles.³⁶ Based on analogies it was dated to the middle of 11th century. This is a rare ornament on byzantine amphorae found in Dobrogea, with just a couple known, while the simple

cross is quite common.³⁷ On a single occasion, in the decoration of a 6th–7th century pot from București-Dămăroaia the *crux gammata* was associated with a *crux quadrata* (Greek cross).³⁸

In the Basarabi-Murfatlar cave complex (Constanța county) dated to the 10th–11th centuries, seen by many as the first known Christian church and the first sanctums of a monastery from the territory of Romania, on the altars carved in the cave walls we meet among others also this symbol.³⁹

The first ruler of Wallachia, Negru Vodă, was buried in the early 14th century with brocade having gold metallic thread with *crux gammata* ornament. The burial shroud of Byzantine princess Maria Asanina Palaiologina, the second wife of prince Ștefan cel Mare, is a masterpiece of religious handicraft which combines the Byzantine art style with western influences, and was made around 1476. While it brings together echoes of gothic art and islamic geometric patterns, between the embroidery motifs on this shroud from Putna monastery there are also two occurrences of the *crux gammata*⁴⁰ (Fig. 7).

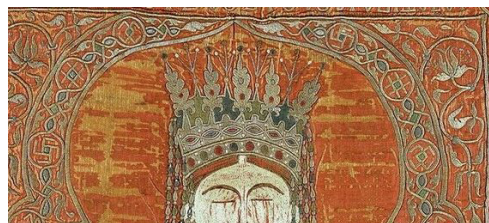


Fig. 7. The burial shroud of Maria Asanina Palaiologina (detail), from Putna (photo: putna.ro).

³² BENEĂ 1995, 374.

³³ DUMITRIU 2000, 56.

³⁴ DUMITRIU 2000, 50.

³⁵ IGNAT 2022, 234–235.

³⁶ BARNEA 1959, 906.

³⁷ STĂNICĂ 2012, 62.

³⁸ STANCIU 2018, fig. 5.2.

³⁹ BORONEANȚ 2002, 26.

⁴⁰ TEODORESCU 2004, 7.

CHRONOLOGY

There is a large variety of medieval rings, it is almost impossible to find two identical. Typologies were made upon their shape and decorations. In the material culture of the conquering Hungarians rings are not frequent, it seems that its wearing was not a widely spread habit yet.⁴¹ Although till the first Mongol invasion the seal rings typically had only a small bezel of 10–15 mm,⁴² the bezel size of the ring from Gălăţeni might be too small to consider it a seal ring. The formal antecedents of the medieval seal rings are known from common cemeteries dated to the 10th–11th centuries.⁴³ Researchers noticed a connection between the earlier, widening-headed finger rings and later (14th–16th century) medieval cast seal rings.⁴⁴ The use of documents, with seals by private individuals began towards the end of the 12th century and spread in the early 13th century. Often these seals replicate the iconography from coins, view which is shared by several researchers.⁴⁵

In the medieval Hungarian kingdom, on a document first time a seal with Greek cross appears only in 1236.⁴⁶ On rings from the medieval Hungarian Kingdom area we meet this motif from the second half of the 13th century,⁴⁷ especially on silver seal rings. The Greek cross is present on the coins minted by almost each Hungarian king from the Arpad house. A close similarity with the ring's decoration can be noted on a silver coin attributed to king Bela II (type Unger-52, CNH 87, Huszar-99).⁴⁸ This ring type with bezel joint with the ring link in the Pannonia region was assigned to the 13th

century,⁴⁹ while the first seal rings, which are datable with coins, were buried in the first half of the 13th century.

A close analogy we have from the Zăbala (Covasna county) necropolis, dated to the second half of the 12th century by the Hungarian medieval coins spanning from II. Géza to III. Béla. The ring is decorated on the bezel also with a Greek cross, with incised lines in each of its four fields in shape of radial stripes. The hoop widens below the bezel, with parallel incised lines as decoration.⁵⁰

Another analogy we have with a silver ring found in the necropolis from Cuptoare-Sfogea (com Gornea, Caraş-Severin county). It has a circular shaped top, divided by a Greek cross in four fields, with one line in each field, pointing from the middle of the cross towards the outer circle of the bezel.⁵¹ The necropolis from Cuptoare-Sfogea was dated to the 12th–14th centuries.⁵² Rings with chaton, having similar formal type as the ring from Gălăţeni, were found also in the 12th century necropolis from Peteni (Covasna county).⁵³ Examining the grave goods from Zăbala and Peteni, researcher Z. Székely observes significant byzantine influences on the jewelry.⁵⁴

In the funeral horizon of Byzantine origin from the Banat, and the area between the Southern Carpathians, the Danube and the Olt river this type of ring is attributed to the South-Danubian Burial Horizon-2⁵⁵ (end of 11th century – early 13th century). In Bulgaria the Grigorov III.1 type finger rings present the closest similarity by formal type and decoration.

⁴¹ RÓZSA-SZIGETI 2021, 268.

⁴² LOVAG 1980, 232.

⁴³ TÜRK 2001, 382.

⁴⁴ RÓZSA-SZIGETI 2021, 268.

⁴⁵ SONOC-GRIŞAN 2002–2003, 186; SZÉKELY 1990, 108.

⁴⁶ KUMOROVITZ 1936, 55, fig. 20.

⁴⁷ LITAUSZKI 2012, 24.

⁴⁸ UNGER 1997, 70. RÉTHY 1899, 16.

⁴⁹ LOVAG 1980, 223–225.

⁵⁰ SZÉKELY 1973, 221.

⁵¹ ŢEICU 2009, pl. 17/6.

⁵² UZUM 1987.

⁵³ SZÉKELY 1990, fig. 10/4, 13/12.

⁵⁴ SZÉKELY 1981, 140.

⁵⁵ OŢA 2005, fig. 1; OŢA 2015, pl. 132.

Only a few specimens from this type are published in the Bulgarian literature, their datation spans from the second half of the 9th century till the end of 11th century. The Grigorov III type rings all show a good analogy if we take into the consideration only their formal types and disregard the decorations. All are dated in the same period as type III.1, ending at the beginning of 12th century. In the statistics of the known specimens from type III rings, the III.1 subtype has the lowest known pieces, less than 20.⁵⁶

In the 10th–14th century Banat, finger-rings with raised bezel (Oța III.2.4.3. Type) as grave goods are known from 11 sites, and their chronology spans the entire period between the 10th and the 15th century.⁵⁷ One of the finger rings found at Arača⁵⁸ (Serbia) is a good analogy with Greek cross decoration on the bezel (Oța 2015, pl. 14/15). Further south we must mention a ring from Braničevo Okrug (Serbia) with same formal type and cross-decoration, dated to the 11th–13th centuries.⁵⁹ A catalog of the Serbian National Museum's jewelry collection from the 12th to the 15th centuries lists two bronze rings found in Belgrade area with forms very close to the ring from Gălățeni, both dated to the 12th–13th centuries.⁶⁰ A more recent research on byzantine jewelry in Serbia places these ring types to the 11th–12th centuries.⁶¹ They are well represented in the medieval necropolis from Ravna, near Knjazevac, where the researchers propose a lower, 10th century date, based on parallels from Bulgaria.⁶²

Zoltán Litauszki in his thesis classified the rings only upon their decorations. The rings with equal-armed decoration (type 4.1 in Litauszki

classification) are missing almost entirely from the discussed region, with only one known. This type of decoration is rare on the entire territory of the medieval Hungarian Kingdom according to Zsuzsa Lovag, with only two known⁶³ from the ages of the Árpád Dynasty at the time she published her paper.⁶⁴

In an earlier approach, K. Éry Kinga believes the christian symbols represented on these ring types could equally result from the bulgarian presence in the area in the 9th century and the byzantine influence⁶⁵. The ring from Gălățeni could be an evolved, a bit more elaborated later form of the D1-type closed plate rings from Keszi Tamás's classification, which according to the researcher is a jewelry type that appeared in Byzantine environment at the end of 8th century – beginning of the 9th century, using the iconography from earlier more simple ring designs⁶⁶. Keszi Tamás's opinion is that these must be dated to the 10th century⁶⁷, and that they've completely disappeared by the beginning of the 11th century. Earlier parallels from Albania, Greece⁶⁸ are seen as an indication that this type of jewelry started spreading from the South Balkans towards the north. According to his research, the D1-type rings, when they were found in burials for which the sex and age of the deceased could be determined, they were always woman and children.

⁵⁶ GRIGOROV 2007, 201, fig. 72; 77.

⁵⁷ OȚA 2015, 136, pl. 15/1–3.

⁵⁸ STANOJEV 2004, 56–67.

⁵⁹ ŠPEHAR 2007, fig. 5/11.

⁶⁰ MILOŠEVIĆ 1990, 59.

⁶¹ BIKIĆ 2010, 92–100.

⁶² JOVANOVIĆ–VUKSAN 2005, 217–218, 240.

⁶³ LOVAG 1980, 228.

⁶⁴ We must take into consideration the fact that Zsuzsa Lovag in the paper mentions only the rings which came from datable context.

⁶⁵ ÉRY 1955, 66–67.

⁶⁶ LANGÓ 2016, 402.

⁶⁷ KESZI 1999, 142.

⁶⁸ DAVIDSON 1952, pl. 105, 106.

CONCLUSIONS

The ring from Gălățeni presented in this paper belongs to a horizon of the 11th–12th centuries. It was lost by its owner; therefore, it wasn't found in a clearly datable context. Balcanic or Byzantine tradition can be noted and it was probably not locally made, but in a workshop somewhere in the Carpathian Basin, or even a more southern import cannot be ruled out. Based on its size, and analogies, we can assume that it was a woman's ring and the owner was not from the lower class. Although it is shaped

like a seal ring, most likely this wasn't its purpose, but was used as a symbolic expression of faith. It has an interesting decoration, for which we could not find analogies in the Carpathian Basin. Its material is also uncommon, as the cast rings with similar formal type in the 10th–12th centuries were usually made from bronze. Although the local parish church is mentioned in documents only in 1332, in the light of this new discovery we can assume that the settlement must be at least a century earlier.

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CASA AURARULUI MICHAEL LUTSCH. DATE NOI PRIVIND ISTORICUL UNEI CASE DE LOCUIT PREMODERNE DIN CLUJ¹

MELINDA MIHÁLY*

This study is dedicated to a pre-modern dwelling house in downtown Cluj, located on the south side of today's Memorandumului Street. Although the edifice features many aspects of the stylistic evolution of the architecture of Cluj, built in Gothic style, with considerable changes that pertained to the Renaissance and then the Baroque styles, the history of the edifice is almost unknown. Our study aims to provide a detailed description of the building, to outline the various stages of its construction, and to identify the people who animated its spaces and contributed to the history of the building.

Keywords: Cluj, dwelling house, printing house, Gothic architecture, Renaissance architecture, Baroque architecture, goldsmith

Cuvinte-cheie: Cluj, casă de locuit, tipografie, arhitectură gotică, arhitectură renascentistă, arhitectură barocă, aurar

Studiul de față este dedicat unui imobil din centrul Clujului, care azi iese în evidență între celelalte edificii datorită elementelor de articulare premoderne ale fațadei principale. Deși clădirea prezintă o serie de elemente structurale ori decorative din perioada medievală și premodernă, dintre care se remarcă poarta carosabilă marcată cu o inscripție din anul 1653, portalul renascentist târziu, precum și placa

comemorative barocă de breaslă, istoricul edificiului este aproape necunoscut în literatura istoriei locale.

Studiul nostru vizează descrierea detaliată a edificiului, în vederea prezentării multiplelor aspecte stilistice ale acestuia, conturarea diferitelor faze de construire, precum și identificarea persoanelor care i-au animat spațiile, contribuind astfel la istoricul clădirii.

DESCRIEREA EDIFICIULUI

Clădirea se află în centrul istoric al Clujului, pe latura de sud a străzii Memorandumului de azi, la nr. 15, fiind a treia clădire spre vest, dinspre colțul format de strada Memorandumului și strada Ioan Rațiu de astăzi. Edificiul se află pe o parcelă relativ îngustă, de aproximativ 10 metri lățime. Inițial parcela avea acces și dinspre strada Episcop Ioan Bob, capătul de sud al lotului fiind vândut și închis cu o anexă în perioada 1859–1917 (Fig. 1).

Edificiul studiat este construit pe un plan dreptunghiular, ușor neregulat, pe trei nivele (subsol, parter, etaj), în capătul lotului fiind ridicate o serie de anexe moderne.

Fațada principală a edificiului este articulată de un soclu înalt, un brâu median, și o cornișă bogat profilată (Fig. 3). Soclul este placat cu plăci de calcar, profilate în partea superioară cu un semitor pronunțat, pornit de pe o suprafață teșită, cu un listel îngust și cu o semiscotie

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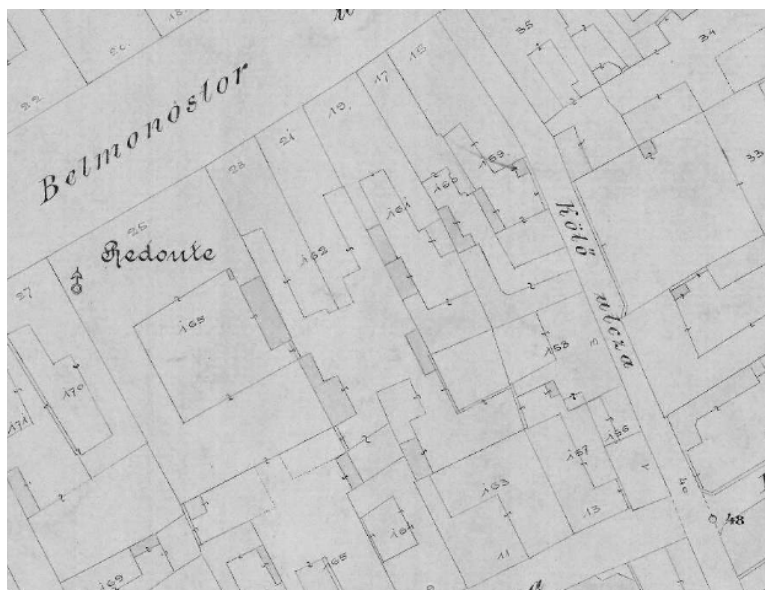


Fig. 1. Parcela casei pe harta cadastrală a Clujului, 1917 (str. Belmonostor nr. 19.), Biblioteca Națională Széchenyi, Fondul hărților.

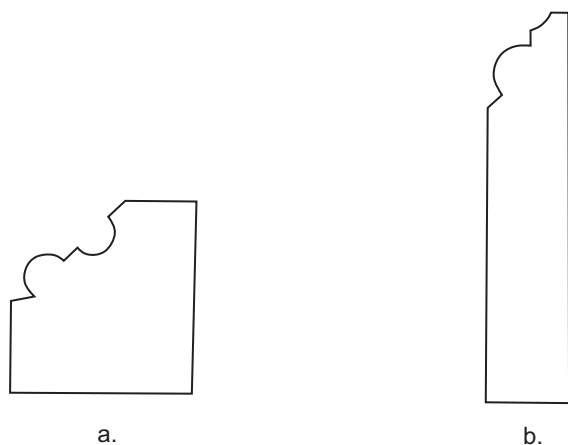


Fig. 2. Secțiunea porții carosabile (a) și a soclului (b). Desen realizat de Melinda Mihály, 2020.

(Fig. 2b). Pe cele două laturi ale porții carosabile soclul este prevăzut cu două guri de aerisire ale subsolului, dispuse în poziție asimetrică. Suprafața parterului este netedă, cea a etajului fiind decorată între deschideri cu panouri dreptunghiulare adâncite. Parterul este străpuns de trei axe de goluri, de două ferestre și o poartă carosabilă, în axa de vest. Ferestrele sunt dreptunghiulare, cu chenare simple din tencuială, închise cu canate termoizolante albe. Poarta carosabilă are închidere semicirculară, prevăzută cu un ancadrament cioplit din calcar, cu o profilatură asemănătoare cu cea a soclului, compusă dintr-o

semibaghetă, pornită de pe o suprafață teșită, un listel îngust, o semiscotie și un ultim listel îngust (Fig. 2a, 4). Profilatura ancadramentului pornește de la o înălțime relativ mare, de la 180, respectiv de la 187 de cm, de pe o suprafață teșită. În închiderea arcului porții se află un scut renașcentist, ieșit din planul profilaturii, marcat cu monograma GML, încadrat de anul 1653 (Fig. 5). Scutul este prevăzut cu un chenar profilat cu un listel, suprafața acestuia păstrând și azi urmele cromaticii inițiale, monograma fiind vopsită în culoare roșie, iar cifrele anului în culoare neagră. Cele patru ferestre de la etaj sunt dreptunghiulare, prevăzute cu chenare în platbandă din tencuială. Ferestrele sunt încoronate cu cornișe profilate și cu frize decorate cu ghirlande de frunze de laur, fixate în capete cu nituri sferice. Pervazurile ferestrelor sunt profilate cu semibaghetă și cu două listele, profilatura acestora fiind în retragere treptată la extremități. Suprafețele delimitate de pervaz și brâul median sunt marcate de câte un panou dreptunghiular, adâncit treptat.

Fațada dinspre curte a clădirii are un aspect sobru, fiind articulată doar de soclul tencuit, nivelul etajului aflându-se într-o ușoară retragere față de planul parterului (Fig. 6). Soclul fațadei este străpuns de o gură de aerisire a subsolului, în latura de vest a fațadei. Parterul este marcat de gangul intrării încheiat în arc semicircular, precum și de o fereastră dreptunghiulară, la est de gang. Cea de-a doua fereastră a parterului este acoperită de anexa clădirii. Etajul fațadei dinspre curte este prevăzut cu trei deschideri, dintre care în axa de vest și în axa centrală se află câte o fereastră largă, cu închidere semicirculară, de factură barocă, iar în axa de est regăsim o fereastră dreptunghiulară. Presupunem, că inițial cele două deschideri semicirculare formau arcade deschise spre un foișor. Între cele două ferestre cu închidere semicirculară se află o placă comemorativă din calcar. Placa se păstrează doar parțial, colțurile



Fig. 3. Fațada principală a clădirii
(foto Melinda Mihály, 2020)



Fig. 4. Poarta carosabilă (foto Melinda Mihály, 2011)

inferioare fiind intersectate de chenarele în plat-bandă ale ferestrelor. Partea inferioară a plăcii, destinată inițial inscripției comemorative este ciuntită și acoperită parțial de tencuială. Partea superioară a plăcii reprezintă o pereche de lei rampanți, cu capetele întoarse spre laturile plăcii. Leii țin semnul breslei postăvarilor, încoronat cu o coroană deschisă. Deasupra capetelor leilor este gravat anul confecționării plăcii: 1764 (Fig. 7, 8).²

Gangul porții de intrare este acoperit cu o boltă semicilindrică, cu penetrații în axele deschiderilor (Fig. 9). În colțul sud-vestic al gangului, se află o construcție ulterioară, destinată casei scărilor ce conduc spre etaj. Nivelul de călcare al gangului în apropierea porții are o pantă abruptă, diferența de nivel dintre capătul de sud și cel de nord al gangului fiind de aprox. 130 cm. Pe latura de est al gangului se află șirul unor deschideri spre încăperile de la parter, realizate

în diferitele faze de construcție ale edificiului. Prima deschidere dinspre stradă este un portal gotic târziu, urmat de alte două uși dreptunghiulare, fără chenar, șirul fiind închis de accesul în



Fig. 5. Monograma porții carosabile
(foto Melinda Mihály, 2011)

² Placa a fost desenată de către Lajos Pákei, arhitectul-șef al orașului de la cumpăna secolelor XIX–XX. Pe desen apare imaginea completă a plăcii, care poate fi un document al stării inițiale, însă în același timp poate fi și o completare inventată de către arhitect. Pe desen semnul breslei postăvarilor este încadrat de un panou adâncit, cu închidere semicirculară. Colțurile superioare ale plăcii sunt decorate cu câte o rozetă, iar în partea inferioară se află un panou îngust adâncit, cu colțurile evazate, fără inscripție. Datarea plăcii este desenată greșit, deoarece în locul anului 1764 la Pákei apare anul 1664.



Fig. 6. Fațada dinspre curte a clădirii (foto Melinda Mihály, 2011)



Fig. 7. Semnul breslei postăvarilor de pe fațada dinspre curte (foto Melinda Mihály, 2020)

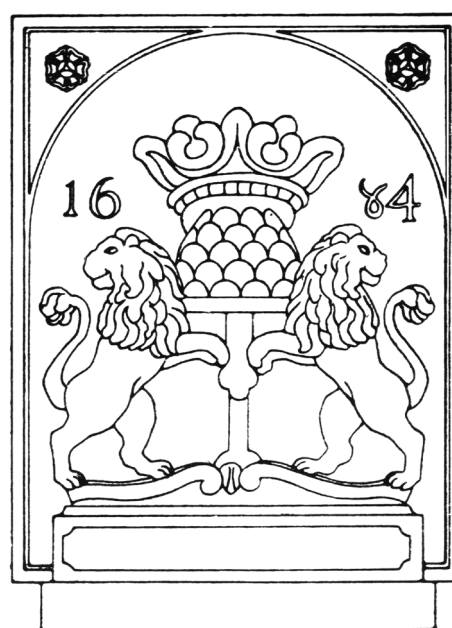


Fig. 8. Semnul breslei postăvarilor. Desen realizat de către Lajos Pákei, 1918



Fig. 9. Gangul porții carosabile (foto Melinda Mihály, 2020)

subsol, prevăzut cu un ancadrament baroc din calcar. Între primele trei intrări ale gangului se află două nișe dreptunghiulare, destinate alimentării exterioare a sobelor.

Cel mai vechi element arhitectonic al clădirii este cu siguranță portalul gotic, aflat la o înălțime de 66 cm față de nivelul de călcare actual, prevăzut azi cu o rampă placată cu plăci de faianță contemporane. Portalul are un ancadrament specific goticului târziu, profilat cu baghete încrucișate în colțurile superioare, cu lintelul sprijinit pe console (Fig. 10). Montanții portalului, prevăzuți cu baze poligonale, sunt profilați cu scotie, semibaghetă, scotie, două listele pronunțate, scotie, semibaghetă și scotie (Fig. 11). Muchiile ancadramentului sunt teșite. Profilatura celor două semibaghete pornește de pe postamente în torsadă, postamentul unuia dintre listele dublate fiind decorată cu un panou adâncit. Portalul se păstrează doar fragmentar, o parte a profilaturii fiind distrusă cu ocazia lărgirii deschiderii, astfel din montanțul din stânga lipsește semibaghetă interioară și o scotie. Aceleași profile lipsesc și de pe lintelul

portalului. Dintre profilurile proeminente ale portalului semibaghetetele exterioare sunt încrucișate în colțurile superioare, celelalte două fiind cele care prin arcuirea acestora spre interiorul deschiderii formează specificele console ale ancadramentelor gotice târzii. Prin lărgirea deschiderii portalului tocmai aceste console au fost distruse, fiind păstrată doar pornirea arcuită a profilaturii din partea dreaptă. Cele două guri de alimentare ale sobelor din gang sunt prevăzute cu ancadramente dreptunghiulare din calcar, de factură barocă, profilate pe margini cu un listel. Ultima deschidere din gang este intrarea subsolului, încadrată de un ancadrament din calcar, cu închidere în forma unui segment de cerc, marginea ancadramentului fiind profilat cu un listel striat, specific stilului baroc.

Planul parterului clădirii este relativ simplu, fiind compus din trei încăperi, desfășurate de-a lungul axei nord-sud, partea de vest a clădirii fiind ocupată în întregime de gangul intrării (Fig. 12). În colțul de sud-vest al gangului se află o construcție ulterioară, destinată casei scărilor, ce conduce spre spațiile de la etaj. În gangul



Fig. 10. Portalul gotic târziu din gang
(foto Melinda Mihály, 2007)

intrării inițial se afla un grânar vechi, care a dispărut cu ocazia unei renovări de la mijlocul secolului XX.³ Încăperea dinspre stradă a partenerului este un spațiu specific perioadei renascentiste, acoperit cu o boltă semicilindrică cu câte trei penetrații pe laturi, sprijinită pe console treptate renascentiste târzii (Fig. 13). Muchiile penetrațiilor bolții, profilate cu un listel se întâlnesc în centrul pânzei bolții. La intersecția muchiilor centrale bolta este decorată cu o cheie de boltă circulară, prevăzută cu un chenar profilat cu semitor. În câmpul cheii de boltă se află relieful unui pocal, încadrat de două motive *Knorpelwerk*. Pe latura de sud a încăperii a fost amplasat cel mai reprezentativ element decorativ al încăperii, un portal renascentist târziu cioplit din calcar.

Portalul este compus din montanți și un antablament, cu o structură clasică, formată din arhitravă, friză și coronament (Fig. 14, 15). Montanții portalului sunt articulați cu

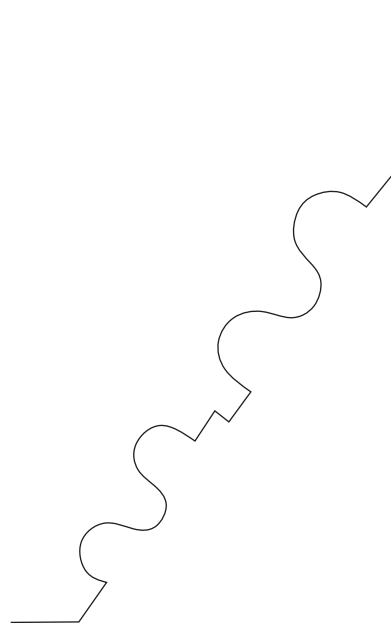


Fig. 11. Secțiunea portalului
gotic târziu. Desen realizat de
Melinda Mihály, 2020.

postamente înalte, decorate cu rozete și cu pilaștri canelați, prevăzuți cu baze profilate cu listel, kyma reversa și listel și cu capiteluri profilate cu listel, semibaghetă, listel, kyma reversa și listel. Postamentul este profilat cu kyma recta, listel, baghetă pronunțată, listel, semibaghetă, listel, baghetă, listel lat, decorat cu rozetă, baghetă, listel, kyma recta. Friza este despărțită de arhitravă de un brâu cu secțiunea unui listel. Pe arhitrava portalului este cioplită cu majuscule o maximă în limba latină: *FIDE SED CVI VIDE* (*Încrede-te, dar ai grijă în cine!*). Elementul central al frizei este monograma GML și anul 1654, gravat în câmpul unui scut renascentist decorat cu volute, scutul fiind flancat de două rozete. Coronamentul portalului este proeminent, profilat cu listel, semibaghetă pronunțată, decorată cu un șir de ove, listel, baghetă îngustă, listel, kyma recta decorată cu un șir de frunze și listel. Lintelul este accentuat în flancuri, toate cele trei elemente structurale, arhitrava, friza și coronamentul fiind avansate față de planul antablamentului. Friza este decorată în flancuri cu câte o frunză de acant, accentuate cu gutti, în linia montanților. Canatul ușii este specific stilului

³ KELEMEN 1982, 138, 360; LÖWY ET AL. 1996, 93. Azi se mai păstrează un grânar asemănător pe str. M. Kogălniceanu nr. 17.

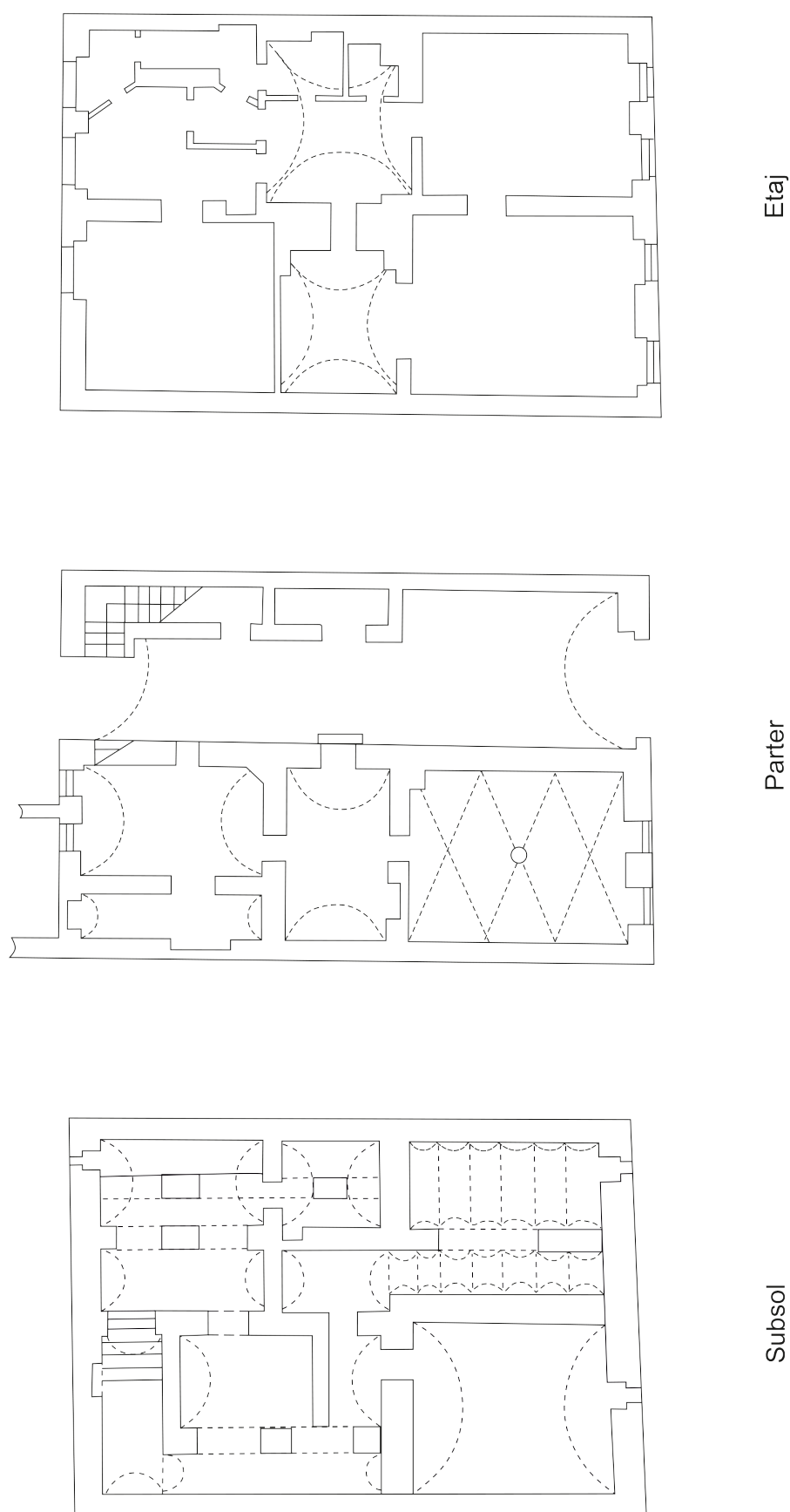


Fig. 12. Planul clădirii (subsol, parter, etaj), releveu realizat în anii 1960–1970, colecția arhitectului Adrian Giurgiu. Redesenat și corectat de Melinda Mihály.



Fig. 13. Încăperea dinspre stradă de la parter (foto Melinda Mihály, 2008)

baroc, articulat cu panouri dreptunghiulare adâncite, care își mai păstrează și astăzi balamalele și sistemul original de închidere.

Celelalte încăperi ale parterului sunt prevăzute cu bolți semicilindrice, cea dinspre curte fiind divizată ulterior în două spații distincte.

Cea mai complexă planimetrie a clădirii se păstrează la nivelul subsolului. Intrarea acestuia se deschide din gangul porții. Pragul ancadramentului se află la 25 cm m adâncime față de nivelul de călcare actual al gangului, cauzat de ridicarea acestuia în latura de sud. Subsolul urmărește în mare parte planimetria parterului, așadar fiind evidentă o compartimentare primară în două tronsoane cu axa longitudinală orientată spre nord-sud. Zidăria subsolului este construită în întregime din piatră de carieră (calcar), încăperile fiind acoperite în majoritatea spațiilor cu bolți semicilindrice din piatră. Această structură a fost modificată ulterior în mai multe rânduri, tronsonul de vest fiind

împărțit în două tronsoane mai înguste delimitate de arcade cu închidere semicirculară. Cele două încăperi din colțul de nord-vest al subsolului sunt delimitate de o arcadă cu închidere în segment de cerc, de factură barocă, deschiderea arcului fiind construită din cărămidă. Aceste două spații sunt acoperite cu bolți sprijinite pe șine metalice, construite din cărămidă, specifice ultimului sfert al secolului al XIX-lea, începutului de secol XX. Încăperile din colțul de sud-vest al subsolului au mai suferit o altă compartimentare ulterioară, cele două spații dinspre est fiind prevăzute cu trei arcade cu închidere în segment de cerc, de factură barocă, sprijinite pe doi stâlpi masivi centrali, tencuiți, construiți pentru susținerea casei scării. Încăperea din colțul de sud-est al subsolului este de asemenea compartimentată în epoca barocă în trei spații mai mici. Primul spațiu este coridorul îngust, cu axa longitudinală orientată pe axa est-vest, destinat scării de intrare în subsol, prevăzut cu trepte cioplite din calcar. Spațiul aflat la nord de coridor este compartimentat de asemenea în alte două spații distincte, de către două arcade cu închidere semicirculară, sprijinite pe stâlpi masivi din calcar. Toate cele trei spații de mai sus sunt acoperite cu bolți semicilindrice din piatră de carieră. Cea mai veche încăperei a subsolului, construită din piatră de carieră și acoperită cu bolți semicilindrice din piatră, s-a păstrat în colțul de nord-est (Fig. 16). Subsolul azi păstrează două ancadramente din calcar, cu închidere semicirculară, cu muchia teșită. Primul ancadrament este cel care comunică între coridorul scării de intrare și spațiul următor, îngust (Fig. 17). Al doilea ancadrament din calcar este cel care asigură accesul încăperii din sud-estul subsolului spre încăperea centrală a tronsonului central. Acesta se află într-o stare bună de conservare, permițând observarea unor detalii, precum pornirea muchiei teșite de pe o suprafață teșită, specifică arhitecturii gotice. Suprafața acestuia păstrează mai multe straturi de văruire, fapt care demonstrează, că ancadramentul se află probabil în poziție secundară, provenind din spațiile de locuit de la parter. Pe latura de nord a zidului de nord al coridorului de intrare se păstrează conturul unei deschideri, care probabil era intrarea inițială din gang.



Fig. 14. Portalul renașcentist, încăperea dinspre stradă de la parter (foto József Sebestyén, 2003)

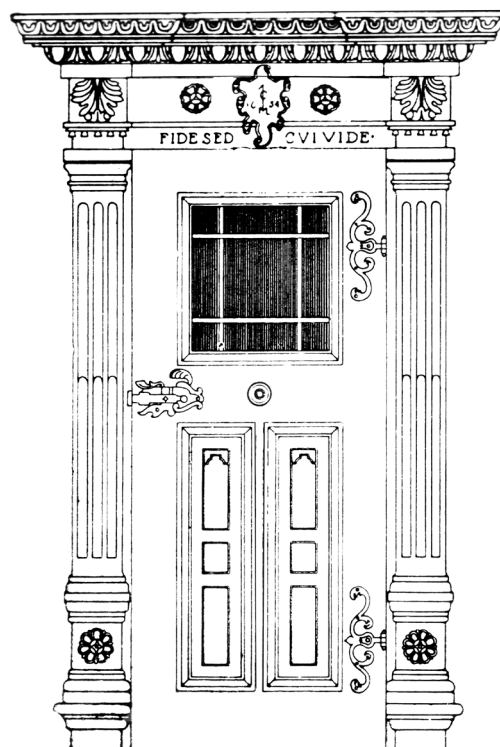


Fig. 15. Portalul renașcentist, încăperea dinspre stradă de la parter. Desen realizat de către Lajos Pákei, 1918

Se mai păstrează de asemenea în spațiul de la nord-est, pe peretele de nord și pe cel vest conturul unor guri de aerisire, înzidite, care aveau acces spre stradă respectiv spre gangul porții, demonstrând faptul, că într-o primă fază casa nu avea subsol sub gang. În zidăria subsolului pot fi observate câteva elemente arhitectonice refolosite, precum un fragment din menoul unei ferestre gotice, profilată pe laturi cu câte o cavetă. Celelalte elemente arhitectonice refolosite provin probabil de la ancadramente renașcentiste, acestea fiind înzidite cu profilatura întoarsă spre grosimea zidăriei.

Casa scării este o construcție modestă, îngustă, prevăzută cu trepte din lemn (Fig. 18). Planul etajului clădirii urmărește în mare parte planimetria parterului, fiind compus din încăperi grupate în două tronsoane, cea dinspre est fiind aproape identică cu compartimentarea parterului. Tronsonul de vest, aflat deasupra gangului, este format de asemenea din trei



Fig. 16. Încăperea cea mai veche a subsolului (foto Melinda Mihály, 2020)

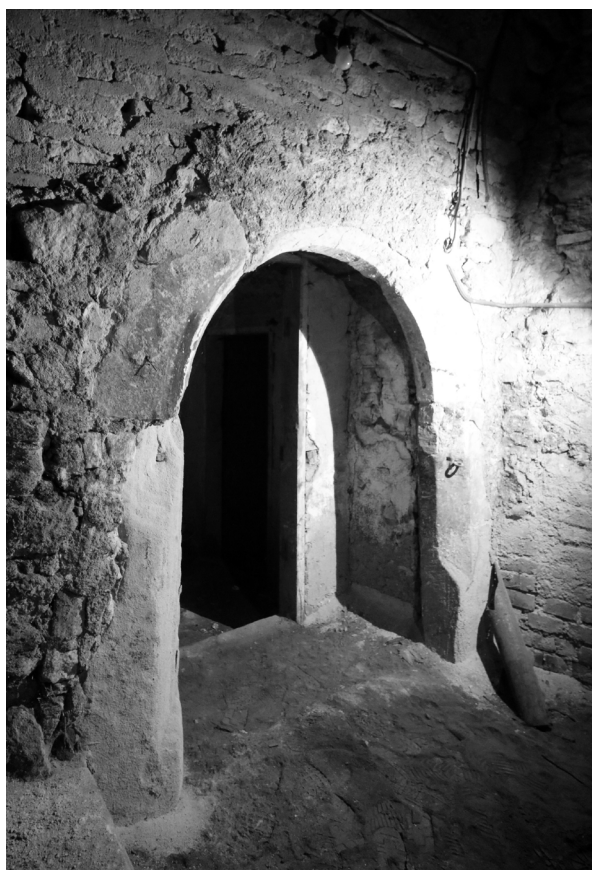


Fig. 17. Portalul gotic din subsol
(foto Melinda Mihály, 2020)

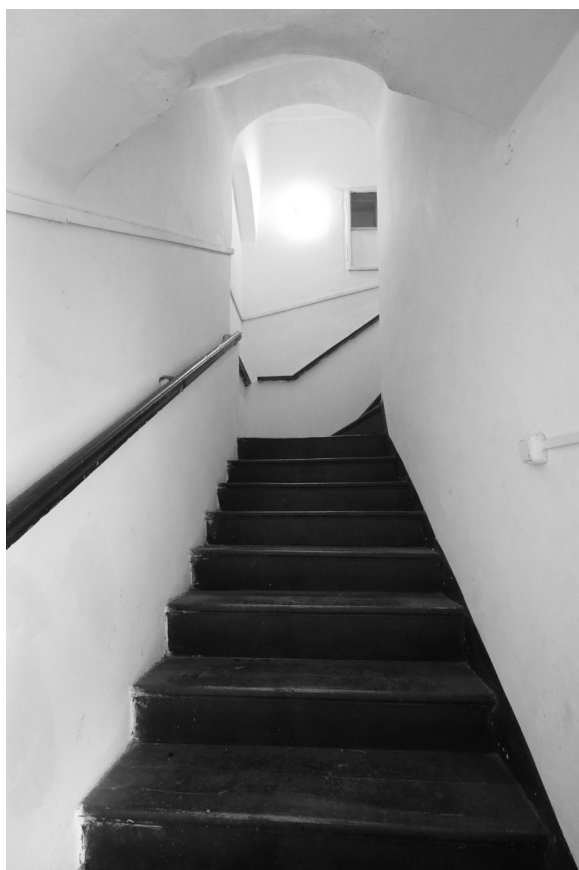


Fig. 18. Casa scărilor (foto Melinda Mihály, 2020)

încăperi, dintre care cea centrală și cea dinspre curte au fost divizate ulterior în mai multe spații în vederea asigurării accesului spre diferite spații comerciale, precum și toaletele acestora. Cele două încăperi reprezentative ale clădirii, aflate dinspre stradă, precum și cele dinspre curte sunt

tăvănite (Fig. 19), spațiile centrale fiind prevăzute cu calote boeme.

În curtea clădirii în anul 2008 se mai afla un fragment de ancadrament renescentist, profilat cu listel, baghetă, listel, kyma și un listel decorat cu un șir de denticuli (Fig. 20).

ISTORICUL CLĂDIRII

Cele două laturi ale străzii Memorandumului s-au format în perioada medievală, când s-a conturat trama stradală a Clujului medieval. Strada este una dintre principalele artere ale orașului nou, format înafara Cetății Vechi / Óvár după 1270, în urma colonizării unei populații de oaspeți germani, la inițiativa regelui Ștefan al V-lea. În literatura de specialitate, această colonizare este considerată a sta la baza formării pieței centrale și a tramei stradale a centrului istoric al Clujului, proces desfășurat probabil în ultimele

două decenii ale secolului al XIII-lea și în prima jumătate a secolului al XIV-lea. Începând din jumătatea a doua a secolului al XIV-lea sunt atestate documentar cele mai importante străzi ale centrului istoric, ceea ce demonstrează faptul că, cel târziu în această perioadă, se formase în această zonă o structură urbană apropiată de cea actuală. Latura de sud a străzii s-a format probabil într-o primă fază, urmată apoi de șirul caselor de pe latura de nord, ridicate în șanțul Cetății Vechi la cumpăna secolelor XV–XVI, ca



Fig. 19. Încăperea dinspre stradă de la etaj (foto Melinda Mihály, 2020)



Fig. 20. Fragment dintr-un ancadrament renașcentist din curte (foto Melinda Mihály, 2008)

urmare a pierderii rolului defensiv a acesteia, după construirea celei de-a doua incinte fortificate medievale a orașului.⁴

Clădirea cercetată se află în interiorul celei de-a doua incinte fortificate medievale a orașului

Cluj. Denumirea istorică a acestei străzi, Strada Mănășturului, alternând în izvoare cu cea de *Platea Rapularum* (Strada Napilor). Încă din perioada medievală era principala arteră care se îndrepta spre Cluj-Mănăștur. Prima mențiune scrisă datează din anul 1436 în forma de *Monostorwcha*, când mai mulți cetățeni clujeni, din străzile Ungurească, de Mijloc, a Lupului, a Mănășturului și a Turzii au trimis o solie la regele Sigismund de Luxemburg.⁵

Cel mai vechi registru de impozite a orașului Cluj, întocmit în anul 1453, menționează pentru prima dată partea din interiorul, precum și din exteriorul incinte fortificate (*[Platea] Rapularum intra muros, Rapularum extra murum*), marcând astfel și suburbia din afara incinte fortificate.⁶

În ceea ce privește denumirea de *Platea Rapularum*, folosită în perioada medievală și cea premodernă, în paralel cu denumirea de *Platea Monostor*, istoricul și arheologul János Herepei

⁴ ENTZ 1996, 83, 343, 353, 354.

⁵ ENTZ 1996, 83, 354.

⁶ KOVÁCS 2018, 181–212.

a formulat ipoteza conform căreia toponimul ar proveni de la un sat medieval dispărut, aflat pe artera respectivă.⁷

Pe baza evoluției urbanistice medievale a orașului se poate afirma că, într-o primă fază, pe parcela cercetată se afla cu siguranță o clădire gotică, probabil cu subsol și cu parter, construită în cursul secolului al XIV-lea. Din această perioadă, astăzi nu poate fi identificat niciun element arhitectonic, cele mai timpurii detalii databile ale edificiului fiind realizate în ultimele trei decenii ale secolului al XV-lea și începutul secolului al XVI-lea. Aceste elemente arhitectonice sunt cele două ancadramente din subsol, menoul unei ferestre gotice, încastrat ulterior în zidăria subsolului, poarta carosabilă și soclul fațadei principale. Pe baza analogiilor, presupunem că menoul ferestrei gotice provine dintr-un ancadrament de fereastră dreptunghiulară, cvadripartită, împărțită în patru ochiuri printr-un menou în formă de cruce. Astfel de exemple se mai păstrează azi în oraș, pe fațada laterală a casei din Piața Unirii nr. 18, precum și pe fațada laterală a casei de pe b-dul Eroilor nr. 10. Din perioada gotică se păstrează cele două încăperi dinspre stradă ale subsolului, în tronsonul de est, celălalt tronson, aflat în partea de vest a casei, sub gangul intrării, fiind construit ulterior.

Din această fază de construcție provine și portalul gotic târziu, care conduce din gangul intrării în prima încăpere dinspre stradă, decorat cu baghete încrucișate, specific ultimelor trei decenii ale secolului al XV-lea. Analogiile clujene ale acestui tip de portal se află în Piața Unirii nr. 15–16, nr. 19, str. Memorandumului nr. 19 și b-dul Eroilor nr. 15. Unicul exemplu datat al acestei serii este cel aflat în încăperea dinspre Piața Centrală a parohiei romano-catolice, realizat în anul 1477, care conform istoricului de artă Szilárd Papp trebuie să fi fost prototipul acestui tip de portal în Cluj.⁸

Edificiul păstrează câteva elemente

arhitectonice specifice goticului târziu și renașterii timpurii, cu profilatură combinată. Deși poarta carosabilă a clădirii este prezentată în literatura de specialitate ca un element arhitectonic specific renașterii târzii,⁹ profilatura acesteia, cioplită pe o suprafață teșită, este specifică goticului, permițând o datare mai timpurie, la sfârșitul secolului al XV-lea, începutul secolului al XVI-lea. Presupunem, că scutul renaștentist a fost inserat ulterior în structura porții. Aceeași profilatură (cioplită pe o suprafață teșită, specifică goticului târziu) poate fi observată și în cazul soclului fațadei principale.

La mijlocul secolului al XVII-lea, între anii 1653–1654, clădirea a fost modificată în stilul renașterii târzii, când încăperea dinspre stradă a parterului a căpătat bolta semicilindrică cu penetrații și portalul sculptat. Cu aceeași ocazie, poarta carosabilă a primit scutul cu monograma proprietarului GML și cu anul 1653, inserat în arcul porții carosabile gotice târzii. Cele mai apropiate analogii clujene ale portalului din anul 1654 sunt portalul din anul 1636 de la etajul casei din Piața Unirii nr. 20¹⁰ și portalul vechii parohii reformate din str. M. Kogălniceanu, realizat în anul 1651, marcat cu monograma BA.¹¹ În același grup se încadrează și fragmentul portalului refolosit în subsolul fostei case a tricesimei, devenit ulterior Cazinoul de Cluj, situat pe bulevardul Eroilor nr. 16.¹² Elementele asemănătoare ale acestor portaluri sunt structura identică a antablamentului, decorat cu rozete și cu câte o frunză de acant în flancuri, arhitrava fiind delimitată de friză și de coronament de câte un listel pronunțat. În șirul acestora se încadrează și fragmentul unui portal din depozitul lapidariului Muzeului Național de Istorie a Transilvaniei, decorat cu o frunză de acant cioplit pe un fundal canelat, accentuat cu un șir de guttae.¹³

Registrele de impozite ale orașului păstrează o serie de informații referitoare la succesiunea

⁷ HEREPEI 2004, 150–157.

⁸ ENTZ 1996, 82, 117, 337, 350, 352; PAPP 2008, 29–30.

⁹ KOVÁCS 2003, 38.

¹⁰ MIHÁLY 2008, 60–68.

¹¹ WEISZ 2018, 166, 171.

¹² Pentru această informație îi mulțumesc colegului meu, istoricul de artă Attila Weisz.

¹³ Piesa nu are număr de inventar.

proprietarilor clădirii din perioada premodernă, astfel fiind posibilă și identificarea acestor persoane, care au contribuit la modificările edificiului din această epocă. Astfel în perioada 1637–1642 casa se afla în proprietatea urmașului lui Benedek Szabó, care însă nu locuia în acest imobil. În acești ani în calitate de chiriaș al casei sunt menționați Pitter Werner și János Kékesi.¹⁴ În această perioadă se schimbă doar chiriașii clădirii, astfel în anul 1638 locul lui Pitter Werner este preluat de Mihály Patócsi,¹⁵ care în anul următor este șters din rândul chiriașilor.¹⁶ Următoarea modificare în șirul proprietarilor edificiului se produce în anul 1642, când imobilul a fost deținut de către două persoane, Hannes Werner și Paul Werner, probabil frați, care au ajuns în posesia clădirii prin moștenire.¹⁷

Construcțiile în stilul renașterii târzii din anii 1653–1654 se datorează cu siguranță aurarului Michael (Mechl) Lutsch. Michael era probabil fiul croitorului Johann Lutsch, care în anul 1607 și în 1628 era staroste breslei croitorilor din Cluj.¹⁸ În anul 1634 Michael și-a înmormântat fiica de 3 ani, Kisanna, în Cimitirul Central / Házsongárd.¹⁹ Michael a fost admis în breasla aurarilor din Cluj în anul 1633,²⁰ obținând între anii 1649–1651 cea mai înaltă funcție din cadrul breslei aurarilor, cea de staroste.²¹ Michael Lutsch a fost prezent și în administrația locală a orașului, în anul 1659 și în anul 1665 fiind menționat ca făcând parte din centumvirat.²² Aurarul era de religie unitariană, ca și majoritatea locuitorilor orașului în acea perioadă la sfârșitul vieții deținând și funcția de epitrof (egyházfi) al bisericii unitariene săsești. El a decedat în data de 23

mai 1676 și a fost înhumat la 27 mai.²³ Numele lui apare pentru prima oară în șirul proprietarilor acestei case doar în anul 1656,²⁴ deoarece din intervalul 1650–1655 nu s-au păstrat registrele de impozite ale acestui cvartal. Presupunem că cel de-al treilea element al monogramei GML provine din numele Goldschmidt, folosit în această perioadă pentru distingerea persoanelor cu același nume de familie, prin indicarea meseriei acestora.²⁵ Numele aurarului apare pentru prima oară în registrul impozitelor orașului în anul 1638 în legătură cu o altă clădire din strada Mănăsturului, aceasta fiind cea de-a patra casă de la colțul străzii Kötő (azi str. Ioan Rațiu), înspre est, pe latura de sud.²⁶ Între anii 1647–1656 aurarul renunță la această casă, devenind posesorul altor două case, probabil în urma unui schimb, acestea fiind a doua și a treia clădire spre vest, de la colțul străzii Kötő (azi str. Ioan Rațiu), pe latura de sud.

Șirul primelor patru case situate la vest de colțul străzii Kötő în ultimele două decenii ale secolului al XVII-lea avea o importanță deosebită în ceea ce privește istoria religiei unitariene din Transilvania. Prima clădire, aflată în posesia lui Péter Köpeczi, în anul 1697 a fost lăsată prin testament bisericii unitariene din Cluj, după cedarea forțată în 1716 a bisericii parohiale Sfântul Mihail în favoarea romano-catolicilor și a devenit una dintre casele de rugăciuni ale acestei comunități.²⁷ A doua și a treia clădire, în perioada 1647–1656, se aflau în proprietatea lui Michael Lutsch. După decesul acestuia în anul 1676, a doua clădire de la colț a fost achiziționată de preotul unitarian András Jövedécsi de la

¹⁴ ANR, REGISTRELE DE IMPOZITE, 22/III.608.; 22/III.630.; 22/III.667.; 23/III.7.

¹⁵ ANR, REGISTRELE DE IMPOZITE, 22/III.630.

¹⁶ ANR, REGISTRELE DE IMPOZITE, 22/III.667.

¹⁷ ANR, REGISTRELE DE IMPOZITE, 24/XII.5.

¹⁸ HEREPEI 1988, 183.

¹⁹ Este cunoscută inscripția funerară, monumentul azi nu se mai păstrează. HEREPEI 1988, 183.

²⁰ FLÓRA 2003, 58.

²¹ JAKAB 1888, 498, 686.

²² BINDER 1982, 304, 306.

²³ BENCZÉDI 1886, 355.

²⁴ ANR, REGISTRELE DE IMPOZITE, 29/II.7.

²⁵ Un astfel de exemplu în Clujul premodern este și cazul preschimbătorului de aur, Petrus Filstich, distins de către directorii de impozite cu atributul *Auricampsor* de aurarul Petrus Filstich, supranumit *Goldschmidt*. VEZI MIHÁLY 2002–2003 (2005), 360.

²⁶ ANR, REGISTRELE DE IMPOZITE, 22/III.635.

²⁷ RÁCZ 2016, 312.

moștenitoarea lui Michael Lutsch, Kata Szász (la data de 11 septembrie 1679).²⁸

Cea de-a treia casă, obiectul studiului de față, a fost deținută de către Michael Lutsch timp de trei decenii.²⁹ În anul 1676, după decesul lui Lutsch, casa rămâne în proprietatea văduvei acestuia, născută Sophia (Jozefa) Dési Szabó. Văduva a murit în anul 1686,³⁰ iar în același an, la data de 28 octombrie 1686, clădirea a fost cumpărată de la urmașii acesteia de soții András Kmita și Christina Wilhelm, polonezi unitarieni, pentru suma de 1000 forinți.³¹ Importanța acestei case era dată și de amplasarea sa, între casa preotului unitarian András Jövedécsi și casa predicatorului unitarienilor polonezi, András Lachovius (Andrzej Łachowski), care era în același timp și casa de locuit a acestuia.³²

Christina Wilhelm s-a căsătorit cu comerciantul András Kmita în anul 1674 încă în Polonia, stabilindu-se apoi împreună în orașul Cluj.³³ Refugiarea unitarienilor poloni în Cluj a avut loc în urma dietei din anul 1658, care a hotărât, că unitarienii sunt obligați să treacă la religia romano-catolică până în data de 10 iulie 1660, sau va trebui să părăsească Polonia. În urma decretului, un număr mare de unitarieni a trecut la religia romano-catolică, însă o parte a ales calea refugiului, emigrând în Prusia, Anglia, Țările de Jos și în Transilvania. Cei din urmă s-au stabilit la Cluj, formând o comunitate religioasă distinctă față de unitarienii maghiari și sași, însă pe parcursul secolului al XVIII-lea treptat s-au maghiarizat, integrându-se în biserica unitariană maghiară în anul 1793, prin unirea celor două parohii din Cluj. După moartea

lui András Kmita, în anul 1688, văduva a continuat să locuiască în acest edificiu. Christina Wilhelm este cea care a înființat tipografia bisericii unitarienilor polonezi în propria sa casă, ori într-o clădire-anexă aflată pe aceeași parcelă, achiziționând din Viena toate uneltele necesare unei tipografii.³⁴ Văduva s-a îngrijit și de aducerea tipografului, în persoana lui Mihály Liszkai.³⁵ Tipografia era una dintre cele două tipografii unitariene din Transilvania de la sfârșitul secolului al XVII-lea. După monopolul bisericii reformate asupra tipografiilor din Cluj, tipografia văduvei lui András Kmita a fost prima dar și singura, care a asigurat tipărirea tuturor operelor religioase necesare liturghiei unitariene, dar și a lucrărilor literare sau științifice.³⁶ După moartea doamnei Christina Wilhelm din anul 1703, tipografia și-a încetat activitatea, fiul ei, János Kmita renunțând la aceasta.³⁷ Cu această ocazie tipografia a fost mutată în clădirea bisericii Sfântul Mihail, care în acel moment încă se afla în proprietatea parohiei unitariene. În anul 1716, cu ocazia preluării bisericii de către armata imperială a fost preluat și echipamentul tipografiei.³⁸

Revenind la soarta casei noastre, în anul 1703, după moartea văduvei lui András Kmita, casa a fost moștenită de unicul ei fiu, János Kmita, singurul rămas în viață din trei copii. Acesta a peregrinat în anul 1695 în Andreaswalde (Kosinowo), iar după revenirea în Transilvania a devenit arhivistul conventului din Cluj-Mănăstur. A decedat probabil în anul 1742.³⁹ În anul 1746 casa era deținută de văduva lui, născută

²⁸ RÁCZ 2016, 312.

²⁹ ANR, REGISTRELE DE IMPOZITE, 29/II.7; 29/XIV.7; 33/VII.7; 32/XXV.4; 33/XXVII.3; 33/XXVIII.3; 34/X.4.

³⁰ Văduva lui Michael Lutsch era mama cronicarului clujean Peter Broser, născut probabil dintr-o căsătorie anterioară a acesteia: KOLOZSVÁRI EMLÉKÍRÓK 1603–1720, 219; HEREPEI 1988, 184.

³¹ RÁCZ 2016, 313; MOLNÁR 2018, 103.

³² MOLNÁR 2018, 103.

³³ MOLNÁR 2018, 103.

³⁴ JAKAB 1895, 325–335; KÉNOSI TÖZSÉR – UZONI FOSZTÓ 2009, 293; MOLNÁR 2018, 105; V. ECSÉDY 2014, 175.

³⁵ MOLNÁR 2018, 104.

³⁶ MOLNÁR 2018, 100.

³⁷ Vezi consimțământul curatorilor bisericii unitariene cu János Kmita din data de 6 octombrie 1707, în privința tipografiei: ILLÉSY 1903, 149.

³⁸ KÉNOSI TÖZSÉR – UZONI FOSZTÓ 2009, 716.

³⁹ KOVÁCS 2011, 371.

Judit Dési, care a moștenit un edificiu ipotecat, cu datorii față de biserica unitariană.⁴⁰

În cea de-a doua jumătate a secolului al XVIII-lea, clădirea se afla în proprietatea familiei Sombori, în anul 1750 casa aparținea lui József Sombori,⁴¹ în anul 1759 lui István Sombori,⁴² probabil fiul celui dintâi, iar în perioada cuprinsă între anii 1778–1796 de către meșterul postăvar János Sombori.⁴³ Această perioadă coincide cu transformarea clădirii în stil baroc, fapt marcat prin placa comemorativă din anul 1764, decorat cu semnul breslei postăvarilor de pe fațada dinspre curte a etajului. Cu această ocazie a fost remodelată fațada principală a edificiului, căpătând o articulare specifică stilului baroc, cu panouri dreptunghiulare adâncite, cuprinzând ancadrame baroce. În această perioadă a fost deschisă intrarea actuală în subsol, prevăzută cu un ancadrament baroc din calcar. Unele încăperi de la etaj au fost de asemenea modificate, fiind acoperite cu bolți a vela. În registrele de impozite ale orașului din anul 1796 este menționat și numărul încăperilor clădirii, prin care se conturează deja planimetria casei actuale. Aceasta avea patru camere la parter, din care două erau boltite și două încăperi mai mici, boltite. La etaj edificiul era prevăzut cu patru camere și cu o cămară. Casa era dotată cu câte o bucătărie atât la parter cât și la etaj, iar în subsol încăpeau 20 de butoaie de vin. La capătul parcelei se mai afla un grajd de piatră pentru

șase cai, un grajd de lemn pentru patru cai alături de care se afla un atelier de postăvărie.⁴⁴

În cea de-a doua jumătate a secolului al XIX-lea, clădirea se afla în proprietatea familiei de armeni Vertán. În registrul locuitorilor orașului Cluj din anul 1869 era consemnat numele proprietarului Tódor Vertán, iar în anul 1900 György Vertán. Presupunem că în această perioadă a fost desființată casa scării, fiind înlocuită cu cea actuală din gangul intrării, sprijinită pe arcadele cu închidere în segment de cerc din subsol.

În cursul secolului al XIX-lea, strada Mănășturului a fost nivelată prin adâncirea laturii de sud, devenind astfel vizibilă și fundația caselor. Acestui fapt i se datorează nivelul ridicat la care se află ancadramele fațadei principale. Presupunem că, cu aceeași ocazie, a fost instalat și paramentul din piatră fasonată al soclului fațadei, în vederea acoperirii fundațiilor. Diferența de nivel azi se mai păstrează în gangul intrării, capătul de sud al gangului fiind supraînălțat cu 25 de cm.

Edificiul a fost renovat de mai multe ori în cursul secolului XX, când a fost eliberat portalul gotic din gangul intrării, care în perioada anterioară a fost înzidită. Cu aceeași ocazie a dispărut din gangul intrării grânarul casei. În anii 2008–2020 a dispărut din curte și fragmentul ancadramentului renascentist, decorat cu un șir de denticuli.

⁴⁰ MOLNÁR 2018, 108.

⁴¹ SZABÓ T. 1983, 7.

⁴² ANU, F 49a, 4–5. Pentru aceste date mulțumesc soțului meu, Zsolt Kovács.

⁴³ ANU, F 49b, 3. Pentru aceste date mulțumesc soțului meu, Zsolt Kovács. Monumentul funerar al lui János Sombori din Cimitirul Central a fost publicat de către János Herepei: HEREPEI 1988, 495–496.

⁴⁴ ANU, F 49c, 51.

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THE HOUSE OF GOLDSMITH MICHAEL LUTSCH. NEW DATA ON THE HISTORY OF A PRE-MODERN TOWN HOUSE IN CLUJ

(Summary)

This study is dedicated to a dwelling house in downtown Cluj, which stands out from the other buildings due to the pre-modern articulation elements of its main façade. Although the edifice has a series of structural or decorative elements from the medieval and pre-modern periods, including a Late Gothic portal from the 15th century, a drive-through gate from 1653, a Late Renaissance portal from 1654, and a Baroque guild commemorative plaque, the history of the building is almost unknown in the literature of local history.

Our study focuses on the detailed description of the building, with a view to presenting its many stylistic aspects, outlining its various phases of construction, and identifying the people who animated its spaces and contributed, in one way or another, to the history of the building.

Based on the medieval urbanistic evolution of the city, it can be stated that in the first phase there was certainly a Gothic building on the investigated plot. It probably had a basement and a ground floor, built during the fourteenth century.

In the middle of the seventeenth century, between 1653–1654, the building was modified in the Late Renaissance style by the goldsmith Michael (Mechl) Lutsch.

In the last two decades of the seventeenth

century the building was of particular importance for the history of the Unitarian religion in Transylvania. On October 28, 1686, it was bought by Polish Unitarians András Kmita and his wife Christina Wilhelm. This house was important because it was positioned between the house of the Unitarian priest András Jövedécsi and the home of the preacher of the Polish Unitarians, András Lachovius (Andrzej Łachowski). Christina Wilhelm and András Kmita settled together in Cluj after their banishment from Poland. Christina Wilhelm was the one who established the printing house of the Polish Unitarian Church in her own home, or in an annex building on her plot, acquiring from Vienna all the tools needed for a printing house. This was one of the two Unitarian printing houses in late seventeenth-century Transylvania.

In the second half of the eighteenth century the building was owned by the Sombori family. This period coincided with the transformation of the building in the Baroque style, marked by the building plaque from 1764, decorated with the crest of the Drapers' Guild.

The edifice was renovated several times during the twentieth century, when the Gothic portal of the entrance gangway was discovered, after having been walled in during the previous period.

STORIES OF TEETH. A COMPARATIVE RESEARCH OF HUMAN TEETH FROM DIFFERENT ARCHAEOLOGICAL AGES IN TRANSYLVANIA

SZILÁRD SÁNDOR GÁL*

Dental morphology has an important role in examination of health status of ancient communities. The analysis of teeth from different archaeological contexts reflect how many particularities could be observed between people of the past and today's population. The following study is an attempt to present major periodontal diseases on human tooth from different archaeological periods in Transylvania.

Keywords: dental morphology, dental diseases, Late Bronze Age, Early Iron Age, Middle Ages, Early Modern Age

Cuvinte-cheie: morfologie dentară, boli dentare, epoca Bronzului Târziu, prima epocă a fierului, ev mediu, epoca modernă timpurie

The human tooth is a priceless source in understanding the lifestyle and health status of a community. The tooth is the hardest and most mineralized tissue of the human skeleton.¹ The physicochemical structure of the tooth makes it resistant to taphonomy.² In many cases the graves are disturbed or robbed and only the teeth contain any information about the deceased. The aim of the study is to compare the dental morphology and pathological changes of the mandible in communities from different archaeological periods in Transylvania.

The material of the study was collected from different archaeological excavations (Fig. 1): Voivodeni, Mureș county (Middle Bronze Age, Wietenberg culture, 2200–1509 BC), Sâncraia,³

Recea de Mureș,⁴ Alba County (Early Iron Age, 7th–8th century BC), Teiuș, Recea de Mureș, Alba county, Turda Nouă,⁵ Cluj county, Lopadea Nouă, Ciombrud, Sibiu county and Porumbeni Mari, Harghita county (Middle Ages, Early Modern Age and Modern Age, 14th–18th century AD).⁶ Anthropometric⁷ and dental morphological⁸ analyses were carried out with macroscopic and digital imaging (Image-Pro Insight) methods.

The study started with the reconstruction of the mandible and other parts of the tooth surfaces, followed by their classification and finally the photographic registration of the teeth from vestibular, oral, mesial and distal views.

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¹ SCHEID ET AL. 2012.

² MAYS 1998; CORRON ET AL. 2017.

³ RUSTOIU–BERECKI 2018; RUSTOIU–EGRI 2021.

⁴ KÓCZA 2016.

⁵ DEMJÉN ET AL. 2020.

⁶ DUDÁS ET AL. 2018.

⁷ CAPLE–STEPHAN 2016, 863–879.

⁸ BUDAI 2007.

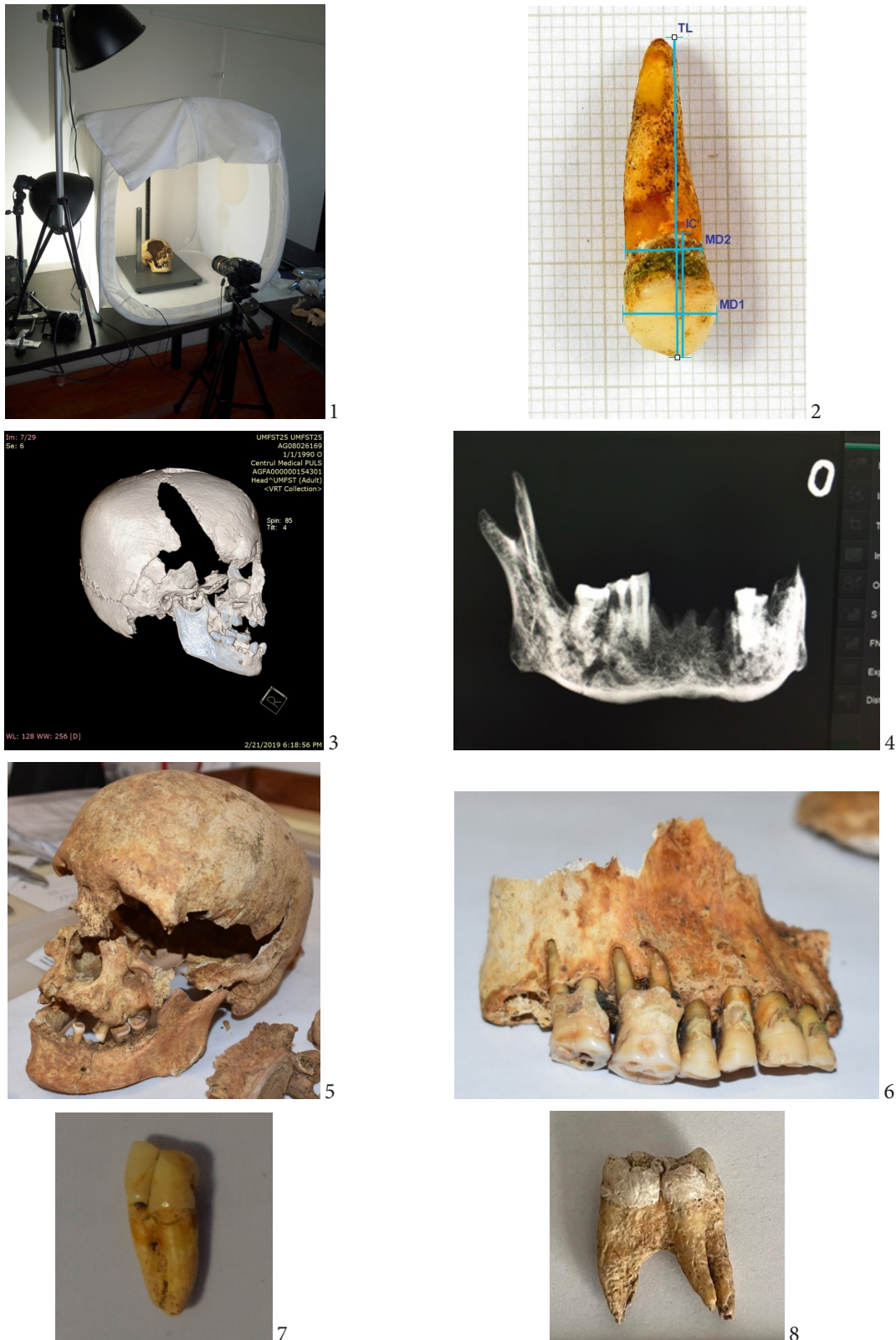


Fig. 1. 1. Photographic documentation of the teeth; 2. Dental measurement with Image-Pro Insight software; 3. CT analysis of teeth, Voivodeni (Bronze Age cemetery); 4. Sâncrai, morphological analysis of teeth with radiographic methods (Early Iron Age cemetery); 5. Teiuș, a case of caries and abrasion (medieval cemetery); 6. Turda Nouă, tartar and abrasion (Modern Age cemetery); 7. Turda Nouă, split tooth (Modern Age cemetery); 8. Recea de Mureș, fused teeth (Late Bronze Age/Early Iron Age cemetery).

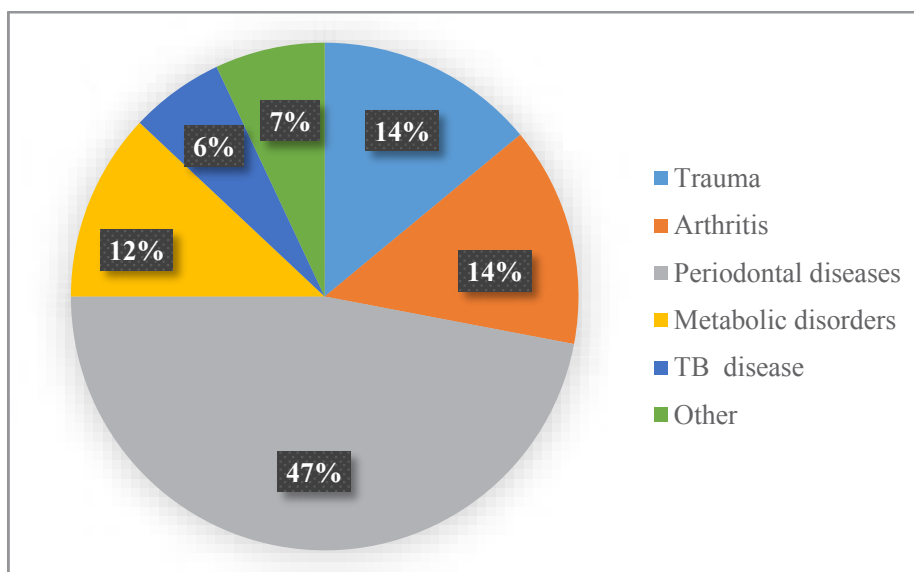


Fig. 2. Distribution of paleopathological cases.

Dental data is a very important stress marker.⁹ The dental wear and different periodontal diseases show the health status of a community, its nutritional background, oral hygiene, genetic background, and lifestyle. Along with stress markers, dental morphology is a very important part of the paleopathological analysis. In many cases, only the teeth are preserved. The most common cases of paleopathology are the periodontal diseases (Fig. 2).¹⁰

Dental diseases can be classified as dental disorder, tooth shape disorder and jaw disorder. Dental disorders can be classified by:¹¹

- Formal characteristics
- Differences in size
- Structural disorders
- Differences in number

The formal characteristics of the tooth include the number and shape of cusps: Tallon¹² and Carabelli cusps on the molars.¹³ The Carabelli cusp appears on the molars of the maxilla and is typical of the Europoid race. It was observed in a few cases from Turda Nouă and

Sânvășii.¹⁴ Tallon cusps (a Mongoloid sign) have been noticed only in a Bronze Age community in Voivodeni.¹⁵

Occlusal anomalies can be another type of formal characteristics in teeth. The most common examples are distal bite and mesial occlusion. Two cases of distal bite from Turda Nouă and Porumbenii Mari can be mentioned in this regard.

Differences in size, namely smaller (Microdontia) or larger (Macrodonia) teeth represent another category. One case of Microdontia is known from Turda Nouă.¹⁶ The samples from grave no. S15/M60 are small molars with extensive caries.

Structural disorders occur in both prehistoric and modern times. A split crown (caninus tooth) occurred in a modern age cemetery in Turda Nouă; a rare disorder of fused premolars is known from a Late Bronze Age/Early Iron Age cemetery in Recea de Mureș (Alba county); while nearly split and fused teeth, an important stress marker, hypoplasia, for chronic childhood

⁹ TIHANYI ET AL. 2015, 65–77.

¹⁰ BOLK 1916, 91–148.

¹¹ BUDAI 2007, 10–12.

¹² MATHEW 2022.

¹³ KRAUS 1951, 348–355; CSAPÓ 2020.

¹⁴ DUDÁS ET AL. 2018.

¹⁵ NÉMETH 2015.

¹⁶ DEMJÉN ET AL. 2020.

disease have been documented in Sânvășii, Mureș county.

Another dental disorder is the unusual number of teeth: extra teeth or missing teeth (dental agenesis or aplasia).¹⁷ Cases of aplasia in the analyzed area (with the third molar missing) are known from Lopadea Nouă, Ocna Mureș, Ciurbrud, Turda Nouă and Porumbeni Mari.

The most common dental morphological disorders are caries and tartar.¹⁸ The tartar is present in all archaeological periods, while caries is typical for medieval and modern cemeteries. Tartar is the effect of poor nutrition and acidic food (wine, tea, fruit).

Several stages of caries could be observed: from simple decay to cavity in the tissue of the mandible and maxilla. All these cases have been documented from medieval and modern cemeteries in Transylvania.

The second major periodontal disorder is the dental wear or abrasion (abrasio media after the scale of Huszár).¹⁹ The abrasion of teeth since childhood is common in all cemeteries. These characteristics reflect the lifestyle (primitive grinding stones) and gastronomy (wild and raw foods) of a community. The hard food led to fractures in the dental crown. The pain threshold of the individuals was very high.²⁰

Large amounts of tartar, poor oral hygiene and bad nutrition led to illness and periodontitis. Caries and premature decay of the teeth is a common feature of all communities. Dental abrasion was widespread in ancient times, e.g. all individuals had heavily worn teeth in the early Iron Age and the Scythian Age,²¹ including milk teeth (deciduous teeth), but abrasion is also present in modern times.

From the Middle Ages to modern times, the most common periodontal disease is caries and tartar.²² The youngest individual with tartar was discovered in a modern age cemetery from Turda Nouă (a 7–10 year old child). The number of cases of caries is higher in Modern Age than in ancient times ($p < 0,05$).

A connection between periodontal disease and several pathological changes in the skeleton was obvious (e.g. cribra orbitalia, porotic hyperostosis – signs of chronic illness) in Sâncraia, Voivodeni, Teiuș, Sânvășii and Turda Nouă.

Differences have been observed in the size of teeth. The dentition of ancient and medieval communities was larger than that of modern people. Teeth are generally smaller today.²³

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¹⁷ RÓZSA ET AL. 2009, 374–379.

¹⁸ ORTNER 2003; ESCLASSAN ET AL. 2009, 287–297.

¹⁹ HUSZÁR 1976.

²⁰ PINDBORG 1970.

²¹ BERECKI ET AL. 2022.

²² ORTNER 2003.

²³ DUDÁS ET AL. 2018.

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ABBREVIATIONS

<i>ActaArchHung</i>	Acta Archaeologica Academiae Scientiarum Hungaricae
<i>ActaMN</i>	Acta Musei Napocensis
<i>Acta MP</i>	Acta Musei Porolissensis
<i>ActaTS</i>	Acta Terrae Septemcastrensis
<i>AIIA</i>	Anuarul Institutului de Istorie și Arheologie "A. D. Xenopol". Iași
<i>AJA</i>	American Journal of Archaeology
<i>Angustia</i>	Angustia. Muzeul Carpaților Răsăriteni
<i>Apulum</i>	Apulum. Acta Musei Apulensis
<i>ArchÉrt</i>	Archaeologiai Értesítő
<i>ArchKorr</i>	Archäologisches Korrespondenzblatt
<i>ArhMold</i>	Arheologia Moldovei
<i>Banatica</i>	Banatica, Muzeul Banatului Montan
<i>BAR (IS)</i>	British Archaeological Reports (–International Series)
<i>BHAUT</i>	Bibliotheca Historica et Archaeologica Universitatis Timisiensis
<i>BJ</i>	Bonner Jahrbücher
<i>BAI</i>	Bibliotheca Archaeologica Iassiensis
<i>BAM</i>	Bibliotheca Memoriae Antiquitatis
<i>BMA</i>	Bibliotheca Musei Apulensis
<i>BMM</i>	Bibliotheca Musei Marisiensis
<i>BMN</i>	Bibliotheca Musei Napocensis
<i>BMP</i>	Bibliotheca Musei Porolissensis
<i>BudRég</i>	Budapest Régiségei
<i>CA</i>	Cercetări Arheologice
<i>CCAR</i>	Cronica Cercetărilor Arheologice din România
<i>Dacia (N. S.)</i>	Dacia. Recherches et découvertes archéologiques en Roumanie, I–XII (1924–1948), Nouvelle série (N. S.): Dacia. Revue d'archéologie et d'histoire ancienne
<i>DolgKoložsvár (Ú.S.)</i>	Dolgozatok az Erdélyi Nemzeti Múzeum Érem- és Régiségtárából, (Új sorozat 2006–)
<i>EMúz</i>	Erdélyi Múzeum
<i>EphemNap</i>	Ephemeris Napocensis
<i>FolArch</i>	Folia Archaeologica
<i>JAHA</i>	Journal of Ancient History and Archaeology
<i>JbRGZM</i>	Jahrbuch des Römisch-Germanischen Zentralmuseums
<i>JRA</i>	Journal of Roman Archaeology
<i>KuBA</i>	Kölner und Bonner Archaeologica
<i>Lymbus</i>	Lymbus. Magyarságtudományi Forrásközlemények
<i>Marisia</i>	Marisia (V–XXXV): Studii și Materiale
<i>Marisia-AHP</i>	Marisia: Archaeologia, Historia, Patrimonium
<i>MCA</i>	Materiale și Cercetări Arheologice
<i>MFME (–StudArch)</i>	A Móra Ferenc Múzeum Évkönyve, (Studia Archaeologica 1995–)
<i>ReiCretActa</i>	Rei Cretariae Romanae Fautorum Acta

<i>RevBis</i>	Revista Bistriței. Complexul Județean Muzeal Bistrița-Năsăud
<i>Sargetia (S.N.)</i>	Sargetia. Acta Musei Devensis
<i>SCIV(A)</i>	Studii și Cercetări de Istorie Veche (și Arheologie 1974–)
<i>StComSfGheorghe</i>	Studii și comunicări. Sfântu Gheorghe
<i>StudiaAA</i>	Studia Antiqua et Archaeologica. Iași

MARISIA. ARCHAEOLOGIA, HISTORIA, PATRIMONIUM

With a publishing tradition since 1965, in 2019 the annual of the Mureș County Museum initiated a new series entitled: *Marisia. Archaeologia, Historia, Patrimonium*. The publication provides a panel for new research results in archeology, architecture and material heritage of the history of arts and culture. The studies mainly focus on the inner Transylvanian region that encompasses also Mureș County. Beyond local valuable contributions, the annual aims at a regional and global concern that is relevant for the whole of Transylvania. Among the annual's missions is to provide mutual interpretation of the research results produced by the Romanian and Hungarian scientific workshops. Therefore, the annual articles are mainly in English but based on the field of research and the approached topic studies in German, Romanian or Hungarian are also accepted.

Cu o tradiție din anul 1965, anuarul Muzeului Județean Mureș s-a relansat în 2019 sub titlul *Marisia. Archaeologia, Historia, Patrimonium*. Această publicație se descrie ca o platformă științifică care cuprinde rezultatele cercetărilor în domenii precum: arheologia, arhitectura și patrimoniul material din zona istoriei artelor și a culturii, studii localizate în regiunea centrală a Transilvaniei, din care face parte județul Mureș. **In extenso**, anuarul își propune să ofere un spațiu unitar contribuțiilor științifice valoroase, relevante din perspectiva geografică a ceea ce înseamnă întreaga regiune a Transilvaniei. Una dintre misiunile publicației este aceea de a oferi tuturor celor interesați spațiul de schimb pentru cele mai noi rezultate din atelierele științifice românești și maghiare. Articolele anuarului sunt scrise în general în limba engleză, existând totodată articole scrise în germană, română și maghiară, în funcție de specificul domeniului și a temei abordate.

A Maros Megyei Múzeum 1965 óta megjelenő évkönyvének 2019-ben útjára bocsátott új sorozata, a *Marisia. Archaeologia, Historia, Patrimonium* elsősorban a mai Maros megyét is magába foglaló belső-erdélyi régió régészeti, épített és tárgyi örökségére, nemkülönben az ezekhez kapcsolódó művészettörténeti, művelődéstörténeti kérdésekre vonatkozó újabb kutatások tudományos fóruma. A lokális perspektíván túl igyekszik kitekinteni a regionális és univerzális összefüggésekre, így a tágran értelmezett Erdély területére nézve is közöl kiemelkedő értékkel bíró tanulmányokat. Küldetésének tekinti a hazai román és magyar tudományos műhelyekben született eredmények kölcsönös tolmácsolását. A dolgozatok nyelve főként az angol, de szakterülettől és témától függően német, román vagy magyar nyelven is közöl írásokat.

